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TEXTILE ORGANON

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WORLD MAN-MADE FIBER SURVEY

Featured in this issue is our annual survey of the world man-made fiber industry. Our customary world directory of man-made fiber producers begins on page 116, the annual cellulosic fiber production and planned capacity survey begins on page 108; and the annual noncellulosic fiber production and planned capacity survey begins on page 104.

Historical world data for most of the tables that appear in this issue can be found in the ***Textile Organon Base Book*** of January 1962 and the following issues of the ***Textile Organon***: June 1966, 1970 and 1979-1985.

As in the past, all data in this issue are in *metric tons* except for the U.S. data on pages 144-152. The tables on pages 101 and 104-115 will be published in the July issue showing data in *millions of pounds*.

Import-export data used to tabulate net available supply by country are not complete at this time. As a result, when these data are obtained, the 1985 net available supply table will be published in the *Organon*.

ACKNOWLEDGEMENTS

This annual world man-made fiber survey would not have been possible without the help and cooperation of more than 170 foreign man-made fiber associations, producing companies and individuals, as well as the U.S. Foreign Service posts reporting through the Office of Textiles and Apparel, Domestic and International Business Administration and the U.S. Department of Commerce. Their efforts are greatly appreciated.

TABLE 1:
WORLD PRODUCTION OF CERTAIN TEXTILE FIBERS

THOUSAND METRIC TONS & *Percent*

TYPE OF FIBER	1979	1980	1981	1982	1983	1984	1985
CELLULOSIC FIBERS (from page 111)							
YARN+MONOFILAMENTS	1176	1161	1104	1023	1040	1029	1025
STAPLE+TOW	2195	2081	2100	1922	1989	2065	1974
TOTAL CELLULOSIC	**3371**	**3242**	**3204**	**2945**	**3029**	**3094**	**2999**
NONCELLULOSIC FIBERS except Olefin (from page 107)							
YARN+MONOFILAMENTS	4889	4732	4809	4480	4851	5210	5526
STAPLE+TOW	5712	5744	6018	5667	6269	6688	6989
TOTAL NONCELL. ABOVE	**10601**	**10476**	**10827**	**10147**	**11120**	**11898**	**12515**
TOTAL MAN-MADE ABOVE	**13972**	**13718**	**14031**	**13092**	**14149**	**14992**	**15514**
% of World Total	*47*	*47*	*45*	*45*	*47*	*42*	*45*
NATURAL FIBERS							
RAW COTTON	10480	13991	15296	14639	14217	19060	17540
RAW WOOL	1576	1607	1626	1629	1641	1682	1676
RAW SILK	55	56	57	55	55	55	56
TOTAL NATURAL ABOVE	**15711**	**15654**	**16979**	**16323**	**15913**	**20797**	**19272**
% of World Total	*53*	*53*	*55*	*55*	*53*	*55*	*55*
WORLD TOTAL ABOVE	**29683**	**29372**	**31010**	**29415**	**30062**	**35789**	**34786**
World Total %	*100*	*100*	*100*	*100*	*100*	*100*	*100*

The silk and man-made fiber data are on a calendar-year basis, while the figures for cotton and wool are on a seasonal basis.

MAN-MADE FIBERS: Data are from pages 107 and 111, as noted. Textile glass fiber and olefin production are not included.

COTTON: International Cotton Advisory Committee. Also see December 1985 *Organon*.

WOOL: Commonwealth Secretariat & The Wool Bureau, Inc. The data are on a scoured basis. Also see the December 1985 *Organon* issue.

SILK: International Silk Association; Food and Agriculture Organization of the United Nations.

Textile Organon

A Monthly Review

JUNE 1986

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WORLD FIBER PRODUCTION CONTINUES TO GROW

From 1979 to 1985, the World noncellulosic yarn and staple+tow production

increased by almost 19%, from 10,601 thousand metric tons in 1979 to 12,515 thousand metric tons in 1985. During the same period, the noncellulosic yarn production rose 13% and production of staple+tow increased by over 22%.

Major growth areas in production during that time have been recorded in:

- China, PRC, where production increased by 361%, of which yarn was up 247% and staple+tow rose 393%.
- India expanded production by 203%, of which yarn rose by 256% and staple+tow increased by 135%
- Indonesia increased production by 102%, of which yarn grew by 239% and staple+tow rose by only 40%.

In 1985, the World noncellulosic yarn and staple+tow production reached 12,515 thousand metric tons, up 5.2% from the 11,898 thousand metric tons produced in 1984. A decline of 3% was recorded for the production of cellulosic yarn and staple in 1985.

The noncellulosic staple+tow production rose by 22% in 1985, from 6,688 thousand metric tons in 1984 to 6,989 thousand metric tons in 1985; and production of noncellulosic yarn increased by 13% to 5,526 thousand metric tons in 1985.

Major growth areas, in the noncellulosic sector, are in Other Africa, Asia and Oceania, where production rose by almost 15% in 1985.

The most significant production increases are noted in the following countries:

- China, PRC - up 26%
- India - rose 19%
- Taiwan - grew 18%

Planned capacities in 1987 over 1986, for both noncellulosic yarn and staple+tow, are noteworthy in the following countries:

- Taiwan - will rise by almost 14%, of which yarn is expected to grow by nearly 21% and staple+tow will increase by almost 7%.
- China, PRC is expected to move up by 13%, with 11% for yarn and 13% for staple+tow.
- Indonesia - combined capacity will increase over 6%. The larger share of that will be in yarn, by 13%.

CELANESE TO CUT POLYESTER STAPLE CAPACITY

Celanese Fibers, A Division of Celanese Corp., is planning to reduce its

production capacity for polyester staple at its Salisbury, N.C. plant by 185 million pounds over the next 18 months. The permanent shutdown will result in 150 to 200 job losses. According to John Fennie, President and General Manager, Textile Fibers, the reduction was necessitated by "the continuing surge of unfair imports of fabric and apparel from the Far East." (DNR 6/3/86)

HERCULES TO INCREASE OLEFIN STAPLE FIBER CAPACITY

Hercules Inc. announced that it will increase its capacity for olefin staple fiber by

20 million pounds at the Oxford, GA. facility. Completion of the expansion is expected by June 1987. (Hercules News Release 6/5/86)

TABLE 2A:
WORLD NONCELLULOSIC FIBER PRODUCTION & PRODUCING CAPACITY BY COUNTRY EXCEPT OLEFIN

THOUSAND METRIC TONS

COUNTRY	ACTUAL PRODUCTION											
	1979			1980			1981			1982		
	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL
WESTERN EUROPE												
Austria	0	29.3	29.3	0	25.4	25.4	0	18.7	18.7	0	16.2	16.2
Benelux[a]	95.2	40.4	135.6	71.9	32.4	104.3	80.4	25.3	105.7	70.6	19.2	89.8
Eire (Ireland)	10.8	32.0	42.8	10.0	31.7	41.7	15.0	31.3	46.3	12.3	28.0	40.3
Finland	0.4	0	0.4	0.4	0	0.4	0.5	0	0.5	0.5	0	0.5
France	78.7	145.3	224.0	65.3	126.7	192.0	66.4	134.8	201.2	64.8	125.3	190.1
West Germany	338.0	421.5	759.5	317.7	402.4	720.1	320.7	431.5	752.2	319.0	350.0	669.0
Greece	9.2	9.5	18.7	9.0	10.0	19.0	9.0	8.9	17.9	8.5	9.3	17.8
Italy/Malta	126.6	233.6	360.2	124.9	229.9	354.8	149.0	286.3	435.3	148.7	280.0	428.7
Portugal	1.7	29.2	30.9	1.4	32.1	33.5	1.1	34.0	35.1	0.9	38.0	38.9
Spain	71.7	141.4	213.1	65.0	136.7	201.7	72.3	168.9	241.2	73.6	157.8	231.4
Switzerland	49.1	30.0	79.1	60.7	23.7	84.4	57.1	27.9	85.0	53.4	27.0	80.4
Turkey	30.0	77.0	107.0	28.0	70.0	98.0	32.4	76.3	108.7	45.1	80.2	125.3
United Kingdom	171.4	209.7	381.1	125.9	161.7	287.6	100.9	148.4	249.3	66.5	137.8	204.3
Total Western Europe	**982.8**	**1398.9**	**2381.7**	**880.2**	**1282.7**	**2162.9**	**904.8**	**1392.3**	**2297.1**	**863.9**	**1268.8**	**2132.7**
EASTERN EUROPE												
Albania	0	0	0	0	0	0	0	0	0	0	0	0
Bulgaria	13.0	35.0	48.0	17.3	37.0	54.3	17.5	39.0	56.5	13.5	38.0	51.5
Czechoslovakia	50.0	22.0	72.0	54.0	22.4	76.4	52.5	37.5	90.0	52.9	35.9	88.8
Germany, D.R.	54.6	77.9	132.5	57.0	82.0	139.0	56.0	78.0	134.0	65.0	78.9	143.9
Hungary	3.2	14.8	18.0	5.8	14.7	20.5	7.0	14.3	21.3	7.6	12.7	20.3
Poland	87.4	65.9	153.3	94.5	68.5	163.0	78.7	40.2	118.9	80.0	54.7	134.7
Romania	35.0	105.0	140.0	33.0	103.0	136.0	39.5	114.5	154.0	41.0	112.0	153.0
U.S.S.R.	273.0	203.0	476.0	319.0	231.0	550.0	311.8	261.0	572.8	322.8	265.0	587.8
Yugoslavia	21.0	35.0	56.0	23.0	40.0	63.0	24.0	41.0	65.0	27.0	47.5	74.5
Total Eastern Europe	**537.2**	**558.6**	**1095.8**	**603.6**	**598.6**	**1202.2**	**587.0**	**625.5**	**1212.5**	**609.8**	**644.7**	**1254.5**
TOTAL EUROPE	**1520.0**	**1957.5**	**3477.5**	**1483.8**	**1881.3**	**3365.1**	**1491.8**	**2017.8**	**3509.6**	**1473.7**	**1913.5**	**3387.2**

Y means yarn+monofilaments.
S means staple+tow+fiberfill.
a. Includes Belgium, Netherlands and Luxembourg.

ACTUAL PRODUCTION									PRODUCING CAPACITY					
1983			1984			1985			1986			1987		
Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL
0	18.0	18.0	0	18.1	18.1	0	18.1	18.1	*0*	*21.0*	*21.0*	*0*	*21.0*	*21.0*
61.9	21.3	83.2	65.5	23.0	88.5	71.0	29.0	100.0	*92.5*	*59.0*	*151.5*	*92.5*	*59.0*	*151.5*
11.0	32.0	43.0	11.5	37.5	49.0	11.5	44.0	55.5	*12.0*	*53.5*	*65.5*	*12.0*	*53.5*	*65.5*
0.5	0	0.5	0.5	0	0.5	0.5	0	0.5	*0.6*	*0*	*0.6*	*0.6*	*0*	*0.6*
63.2	135.1	198.3	60.2	133.6	193.8	60.7	124.0	184.7	*86.0*	*133.0*	*219.0*	*86.0*	*133.0*	*219.0*
339.2	393.0	732.2	352.0	379.0	731.0	360.0	402.0	762.0	*409.0*	*436.0*	*845.0*	*409.0*	*436.0*	*845.0*
9.0	10.0	19.0	9.0	10.0	19.0	9.0	10.0	19.0	*17.7*	*12.0*	*29.7*	*17.7*	*12.0*	*29.7*
142.5	312.6	455.1	154.0	370.4	524.4	170.0	388.0	558.0	*189.7*	*414.0*	*603.7*	*189.7*	*414.0*	*603.7*
1.0	39.0	40.0	1.0	42.0	43.0	1.0	49.0	50.0	*1.5*	*55.0*	*56.5*	*1.5*	*55.0*	*56.5*
64.6	173.2	237.8	77.6	176.8	254.4	85.0	189.0	274.0	*118.0*	*222.7*	*340.7*	*118.0*	*222.7*	*340.7*
58.0	28.0	86.0	69.7	28.3	98.0	72.0	27.5	99.5	*85.0*	*32.0*	*117.0*	*85.0*	*32.0*	*117.0*
48.0	104.5	152.5	52.5	120.7	173.2	52.0	137.9	189.9	*80.0*	*190.0*	*270.0*	*80.0*	*190.0*	*270.0*
80.0	147.7	227.7	83.5	154.0	237.5	90.5	149.0	239.5	*113.0*	*195.0*	*308.0*	*113.0*	*195.0*	*308.0*
878.9	**1414.4**	**2293.3**	**937.0**	**1493.4**	**2430.4**	**983.2**	**1567.5**	**2550.7**	***1205.0***	***1823.2***	***3028.2***	***1205.0***	***1823.2***	***3028.2***
0	0	0	0	0	0	0	0	0	*2.0*	*3.0*	*5.0*	*2.0*	*5.0*	*7.0*
18.0	42.0	60.0	20.0	43.8	63.8	23.0	46.8	69.8	*60.0*	*70.0*	*130.0*	*60.0*	*76.0*	*136.0*
54.0	36.2	90.2	60.0	40.7	100.7	68.0	41.5	109.5	*92.0*	*87.0*	*179.0*	*92.0*	*87.0*	*179.0*
69.0	82.0	151.0	68.5	86.0	154.5	69.0	92.0	161.0	*82.0*	*109.0*	*191.0*	*89.0*	*109.0*	*198.0*
7.6	13.2	20.8	8.0	13.5	21.5	8.2	17.4	25.6	*12.0*	*23.0*	*35.0*	*12.0*	*23.0*	*35.0*
88.4	72.6	161.0	91.4	75.0	166.4	93.4	77.5	170.9	*122.0*	*80.0*	*202.0*	*122.0*	*84.0*	*206.0*
45.0	112.5	157.5	53.0	116.5	169.5	60.0	125.5	185.5	*78.0*	*170.0*	*248.0*	*78.0*	*170.0*	*248.0*
345.0	277.0	622.0	372.8	291.5	664.3	377.8	314.0	691.8	*452.0*	*452.0*	*904.0*	*452.0*	*488.0*	*940.0*
29.0	50.0	79.0	33.0	52.0	85.0	35.0	65.0	100.0	*61.0*	*97.5*	*158.5*	*61.0*	*100.0*	*161.0*
656.0	**685.5**	**1341.5**	**706.7**	**719.0**	**1425.7**	**734.4**	**779.7**	**1514.1**	***961.0***	***1091.5***	***2052.5***	***968.0***	***1142.0***	***2110.0***
1534.9	**2099.9**	**3634.8**	**1643.7**	**2212.4**	**3856.1**	**1717.6**	**2347.2**	**4064.8**	***2166.0***	***2914.7***	***5080.7***	***2173.0***	***2965.2***	***5138.2***

TABLE 2B:
WORLD NONCELLULOSIC FIBER PRODUCTION & PRODUCING CAPACITY BY COUNTRY EXCEPT OLEFIN (Continued)

THOUSAND METRIC TONS

COUNTRY	ACTUAL PRODUCTION											
	1979			1980			1981			1982		
	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL
U.S.A.	**1594.5**	**1889.2**	**3483.7**	**1411.6**	**1830.5**	**3242.1**	**1438.8**	**1836.7**	**3275.5**	**1121.4**	**1481.7**	**2603.1**
OTHER AMERICAS												
Argentina	29.6	22.6	52.2	21.3	12.9	34.2	16.0	8.3	24.3	18.1	11.9	30.0
Bolivia	0	0	0	0	0	0	0	0	0	1.0	0	1.0
Brazil	122.5	91.4	213.9	136.4	95.0	231.4	115.0	86.8	201.8	116.0	82.1	198.1
Canada	73.1	48.5	121.6	74.0	48.0	122.0	65.9	40.0	105.9	52.0	45.0	97.0
Chile	5.0	2.4	7.4	5.0	2.5	7.5	5.0	2.5	7.5	4.6	0.8	5.4
Colombia	28.7	8.0	36.7	28.2	10.9	39.1	32.8	11.2	44.0	31.0	8.8	39.8
Costa Rica	2.0	0	2.0	3.0	0	3.0	3.2	0	3.2	3.3	0	3.3
Ecuador	3.4	0	3.4	3.5	0	3.5	3.5	0	3.5	5.3	0	5.3
Guatemala	+	0	+	0	0	0	0	0	0	0	0	0
Mexico	136.1	93.0	229.1	137.0	102.4	239.4	133.0	111.0	244.0	117.1	115.4	232.5
Peru	7.0	21.0	28.0	10.5	22.5	33.0	10.1	21.1	31.2	11.2	29.4	40.6
Uruguay	1.1	2.4	3.5	1.1	2.6	3.7	0.9	2.1	3.0	0.9	2.7	3.6
Venezuela	11.7	6.1	17.8	11.5	6.0	17.5	7.5	6.0	13.5	8.2	3.6	11.8
Total Other Americas	**420.2**	**295.4**	**715.6**	**431.5**	**302.8**	**734.3**	**392.9**	**289.0**	**681.9**	**368.7**	**299.7**	**668.4**
JAPAN	**631.2**	**731.9**	**1363.1**	**625.7**	**731.1**	**1356.8**	**607.0**	**721.8**	**1328.8**	**593.8**	**708.2**	**1302.0**
OTHER AFRICA, ASIA & OCEANIA												
Australia/N.Z.	16.4	0.5	16.9	12.0	+	12.0	10.0	0	10.0	14.5	0.5	15.0
Bangladesh	0.2	0	0.2	0.3	0	0.3	0.2	0	0.2	0.2	0	0.2
China, P.R.O.	36.0	128.0	164.0	43.0	205.0	248.0	55.0	292.0	347.0	61.0	323.0	384.0
Egypt	1.5	0.4	1.9	1.8	5.0	6.8	2.0	5.0	7.0	3.3	17.6	20.9
India	35.8	27.8	63.6	39.7	30.8	70.5	50.9	39.8	90.7	62.0	44.2	106.2
Indonesia	22.7	50.3	73.0	41.5	53.9	95.4	46.4	55.1	101.5	67.2	58.0	125.2
Iran	5.0	0	5.0	6.0	0	6.0	10.0	10.0	20.0	11.5	20.0	31.5
Israel	9.9	6.4	16.3	10.5	6.6	17.1	10.5	6.8	17.3	9.0	7.0	16.0
Kenya	+	0	+	1.0	0	1.0	1.0	0	1.0	1.8	0	1.8
Korea, Rep. of	237.2	240.1	477.3	255.2	281.2	536.4	284.0	326.4	610.4	301.4	311.1	612.5
Malaysia	0	35.0	35.0	0	36.0	36.0	0	35.0	35.0	0	32.0	32.0
Nigeria	3.0	4.0	7.0	2.5	2.5	5.0	2.7	4.0	6.7	1.2	1.1	2.3
Pakistan	2.0	0	2.0	1.5	0	1.5	1.5	0	1.5	5.1	12.0	17.1
Philippines	25.0	11.6	36.6	30.0	14.0	44.0	32.0	14.0	46.0	29.0	15.0	44.0
South Africa	32.2	19.5	51.7	33.5	20.0	53.5	32.6	20.0	52.6	35.0	24.0	59.0
Sri Lanka	0	0	0	0	0	0	0.8	0	0.8	1.0	0	1.0
Taiwan	256.8	264.5	521.3	264.6	293.2	557.8	298.2	288.8	587.0	280.8	350.1	630.9
Tanzania	0	0	0	0	0	0	0	0	0	1.0	0	1.0
Thailand	39.7	49.9	89.6	36.5	49.5	86.0	40.4	56.3	96.7	37.1	48.0	85.1
Total Other A., A. & O.	**723.4**	**838.0**	**1561.4**	**779.6**	**997.7**	**1777.3**	**878.2**	**1153.2**	**2031.4**	**922.1**	**1263.6**	**2185.7**
WORLD TOTAL	**4889.4**	**5712.0**	**10601.4**	**4732.2**	**5743.4**	**10475.6**	**4808.7**	**6018.5**	**10827.2**	**4479.7**	**5666.7**	**10146.4**

ACTUAL PRODUCTION									PRODUCING CAPACITY					
1983			1984			1985			1986			1987		
Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL
1293.5	**1715.0**	**3008.5**	**1259.8**	**1677.1**	**2936.9**	**1286.3**	**1577.9**	**2864.2**	***1486.0***	***1960.4***	***3446.4***	***1491.9***	***2019.0***	***3510.9***
24.2	16.0	40.2	25.5	21.4	46.9	27.1	16.8	43.9	*61.8*	*30.0*	*91.8*	*61.8*	*30.0*	*91.8*
2.0	0	2.0	0	0	0	0	0	0	*5.0*	*0*	*5.0*	*5.0*	*0*	*5.0*
105.7	79.6	185.3	118.2	97.6	215.8	121.7	100.8	222.5	*165.6*	*125.0*	*290.6*	*165.6*	*125.0*	*290.6*
59.3	53.0	112.3	69.6	59.0	128.6	75.1	54.4	129.5	*120.0*	*77.0*	*197.0*	*120.0*	*77.0*	*197.0*
2.6	1.0	3.6	2.8	1.1	3.9	3.3	2.0	5.3	*10.7*	*8.0*	*18.7*	*10.7*	*8.0*	*18.7*
31.3	8.9	40.2	38.6	10.7	49.3	38.3	12.0	50.3	*72.0*	*15.0*	*87.0*	*72.0*	*15.0*	*87.0*
3.5	0	3.5	3.5	0	3.5	3.5	0	3.5	*8.0*	*0*	*8.0*	*8.0*	*0*	*8.0*
4.6	0	4.6	4.8	0	4.8	4.9	0	4.9	*7.0*	*0*	*7.0*	*7.0*	*0*	*7.0*
0	0	0	0	0	0	0	0	0	*2.0*	*0*	*2.0*	*2.0*	*0*	*2.0*
126.3	142.9	269.2	147.4	151.4	298.8	152.2	158.1	310.3	*209.2*	*212.6*	*421.8*	*209.2*	*227.6*	*436.8*
12.5	31.0	43.5	13.0	34.1	47.1	13.3	33.0	46.3	*19.0*	*43.0*	*62.0*	*19.0*	*43.0*	*62.0*
1.6	3.7	5.3	1.6	3.4	5.0	2.1	4.0	6.1	*2.5*	*5.5*	*8.0*	*3.0*	*5.5*	*8.5*
9.7	4.0	13.7	10.2	5.5	15.7	10.9	6.0	16.9	*23.0*	*11.5*	*34.5*	*23.0*	*11.5*	*34.5*
383.3	**340.1**	**723.4**	**435.2**	**384.2**	**819.4**	**452.4**	**387.1**	**839.5**	***705.8***	***527.6***	***1233.4***	***706.3***	***542.6***	***1248.9***
597.3	**720.9**	**1318.2**	**634.0**	**735.3**	**1369.3**	**640.2**	**757.3**	**1397.5**	***802.5***	***913.0***	***1715.5***	***802.5***	***913.0***	***1715.5***
14.5	1.0	15.5	13.0	1.0	14.0	13.5	1.0	14.5	*25.5*	*1.5*	*27.0*	*25.5*	*1.5*	*27.0*
0.2	5.0	5.2	0.3	10.0	10.3	0.4	0	0.4	*0.9*	*18.0*	*18.9*	*0.9*	*18.0*	*18.9*
66.0	343.4	409.4	103.1	498.0	601.1	125.0	631.0	756.0	*191.0*	*745.0*	*936.0*	*211.0*	*845.0*	*1056.0*
3.5	20.6	24.1	5.5	25.6	31.1	5.6	27.6	33.2	*9.0*	*50.6*	*59.6*	*11.6*	*51.0*	*62.6*
87.2	40.8	128.0	106.3	56.0	162.3	127.5	65.4	192.9	*199.0*	*260.0*	*459.0*	*199.0*	*260.0*	*459.0*
66.4	61.8	128.2	71.5	73.3	144.8	76.9	70.3	147.2	*113.0*	*112.0*	*225.0*	*128.0*	*112.0*	*240.0*
15.0	27.0	42.0	13.5	24.0	37.5	13.5	31.0	44.5	*43.5*	*39.0*	*82.5*	*43.5*	*39.0*	*82.5*
8.7	7.0	15.7	9.5	7.0	16.5	10.5	7.3	17.8	*18.0*	*7.9*	*25.9*	*18.0*	*7.9*	*25.9*
3.8	0	3.8	4.5	1.0	5.5	5.1	1.0	6.1	*17.0*	*5.4*	*22.4*	*17.0*	*5.4*	*22.4*
336.5	327.6	664.1	369.6	376.9	746.5	408.7	402.9	811.6	*430.4*	*426.0*	*856.4*	*446.4*	*426.0*	*872.4*
0	35.0	35.0	0	35.5	35.5	0	38.8	38.8	*0*	*42.0*	*42.0*	*0*	*42.0*	*42.0*
2.5	2.5	5.0	3.0	3.0	6.0	3.2	3.0	6.2	*6.0*	*5.0*	*11.0*	*6.0*	*5.0*	*11.0*
8.1	18.6	26.7	12.0	21.7	33.7	15.6	23.0	38.6	*43.0*	*24.0*	*67.0*	*43.0*	*42.0*	*85.0*
24.5	16.0	40.5	20.5	16.0	36.5	22.0	16.5	38.5	*35.0*	*23.0*	*58.0*	*38.0*	*23.0*	*61.0*
38.0	23.0	61.0	46.5	29.7	76.2	51.0	31.8	82.8	*65.0*	*32.0*	*97.0*	*68.0*	*32.0*	*100.0*
1.0	0	1.0	1.0	0	1.0	1.2	0	1.2	*3.0*	*0*	*3.0*	*3.0*	*0*	*3.0*
323.4	414.0	737.4	417.9	448.0	865.9	509.5	513.4	1022.9	*747.0*	*761.0*	*1508.0*	*901.0*	*812.2*	*1713.2*
3.0	0	3.0	3.0	0	3.0	3.0	0	3.0	*7.0*	*0*	*7.0*	*7.0*	*0*	*7.0*
40.0	50.0	90.0	37.0	52.4	89.4	37.1	55.0	92.1	*75.8*	*68.0*	*143.8*	*74.0*	*68.0*	*142.0*
1042.3	**1393.3**	**2435.6**	**1237.7**	**1679.1**	**2916.8**	**1429.3**	**1919.0**	**3348.3**	***2029.1***	***2620.4***	***4649.5***	***2240.9***	***2790.0***	***5030.9***
4851.3	**6269.2**	**11120.5**	**5210.4**	**6688.1**	**11898.5**	**5525.8**	**6988.5**	**12514.3**	***7189.4***	***8936.1***	***16125.5***	***7414.6***	***9229.8***	***16644.4***

TABLE 3A:
WORLD CELLULOSIC FIBER PRODUCTION & PRODUCING CAPACITY BY COUNTRY

THOUSAND METRIC TONS

COUNTRY	ACTUAL PRODUCTION											
	1979			1980			1981			1982		
	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL
WESTERN EUROPE												
Austria	12.0	98.8	110.8	15.3	100.6	115.9	15.6	107.9	123.5	13.8	100.8	114.6
Belgium/Netherlands	36.1	26.9	63.0	37.4	22.0	59.4	38.3	14.6	52.9	37.1	8.9	46.0
Finland	1.2	48.0	49.2	0.6	47.2	47.8	0	46.6	46.6	0	53.1	53.1
France	18.5	58.9	77.4	16.4	49.6	66.0	11.0	42.9	53.9	8.6	36.9	45.5
West Germany	58.1	50.0	108.1	65.2	46.0	111.2	65.0	50.0	115.0	61.5	50.0	111.5
Greece	7.2	0	7.2	7.2	0	7.2	7.2	0	7.2	7.2	0	7.2
Italy	38.4	39.0	77.4	36.6	27.5	64.1	35.1	24.4	59.5	31.6	14.2	45.8
Norway	0	29.3	29.3	0	28.4	28.4	0	28.4	28.4	0	20.0	20.0
Portugal	2.5	1.7	4.2	2.7	0.7	3.4	2.9	0.3	3.2	0.9	0	0.9
Spain	12.6	45.3	57.9	12.8	40.1	52.9	12.6	37.8	50.4	11.3	31.8	43.1
Sweden	0	36.9	36.9	0	34.9	34.9	0	34.7	34.7	0	38.0	38.0
Switzerland	3.3	0	3.3	1.8	0	1.8	+	0	+	0	0	0
Turkey	0.3	6.0	6.3	0.3	5.0	5.3	0.3	5.0	5.3	0.3	3.0	3.3
United Kingdom	59.2	139.2	198.4	36.7	109.3	146.0	27.0	102.4	129.4	24.0	89.2	113.2
Total Western Europe	**249.4**	**580.0**	**829.4**	**233.0**	**511.3**	**744.3**	**215.0**	**495.0**	**710.0**	**196.3**	**445.9**	**642.2**
EASTERN EUROPE												
Bulgaria	3.2	30.0	33.2	3.3	33.0	36.3	4.3	34.7	39.0	4.0	34.0	38.0
Czechoslovakia	22.0	36.0	58.0	19.8	34.9	54.7	18.2	36.0	54.2	19.6	35.5	55.1
Germany, D.R.	35.0	130.0	165.0	36.5	132.0	168.5	37.0	132.0	169.0	34.0	127.8	161.8
Hungary	0	8.6	8.6	0	9.0	9.0	0	7.5	7.5	0	7.6	7.6
Poland	27.2	56.6	83.8	25.4	61.0	86.4	19.5	44.4	63.9	19.3	45.1	64.4
Romania	9.7	55.0	64.7	9.5	54.0	63.5	9.6	55.0	64.6	8.2	50.0	58.2
U.S.S.R.	298.0	337.0	635.0	305.0	345.0	650.0	300.0	345.5	645.5	294.4	340.5	634.9
Yugoslavia	15.5	58.0	73.5	15.0	58.0	73.0	15.0	58.0	73.0	13.0	55.0	68.0
Total Eastern Europe	**410.6**	**711.2**	**1121.8**	**414.5**	**726.9**	**1141.4**	**403.6**	**713.1**	**1116.7**	**392.5**	**695.5**	**1088.0**
TOTAL EUROPE	**660.0**	**1291.2**	**1951.2**	**647.5**	**1238.2**	**1885.7**	**618.6**	**1208.1**	**1826.7**	**588.8**	**1141.4**	**1730.2**

Y means yarn+monofilaments.

S means staple+tow+fiberfill.

These totals do not include data for the Indonesian pilot plant nor production of cellulosic fibers in North Korea.

Production and producing capacity by country, divided as between rayon and acetate yarn, is given on pages 112 - 113. Also note page 115 for data on production of acetate staple and cigarette tow.

ACTUAL PRODUCTION									PRODUCING CAPACITY					
1983			1984			1985			1986			1987		
Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL
11.4	109.7	121.1	14.8	109.0	123.8	14.9	109.0	123.9	*16.0*	*113.0*	*129.0*	*16.0*	*113.0*	*129.0*
41.1	6.1	47.2	41.1	0	41.1	42.0	0	42.0	*45.2*	*0*	*45.2*	*45.2*	*0*	*45.2*
0	57.6	57.6	0	58.0	58.0	0	60.0	60.0	*0*	*65.0*	*65.0*	*0*	*68.0*	*68.0*
8.4	29.5	37.9	7.5	19.0	26.5	7.0	15.0	22.0	*10.0*	*20.0*	*30.0*	*10.0*	*20.0*	*30.0*
59.0	55.0	114.0	61.0	55.0	116.0	64.0	55.0	119.0	*69.0*	*58.0*	*127.0*	*69.0*	*58.0*	*127.0*
6.3	0	6.3	6.0	0	6.0	7.0	0	7.0	*8.0*	*0*	*8.0*	*8.0*	*0*	*8.0*
29.3	0	29.3	30.6	0	30.6	30.2	0	30.2	*39.0*	*0*	*39.0*	*39.0*	*0*	*39.0*
0	0	0	0	0	0	0	0	0	*0*	*0*	*0*	*0*	*0*	*0*
0.9	0	0.9	1.0	0	1.0	1.0	0	1.0	*2.0*	*0*	*2.0*	*2.0*	*0*	*2.0*
10.5	21.5	32.0	7.2	26.1	33.3	7.5	30.0	37.5	*17.1*	*32.0*	*49.1*	*17.1*	*32.0*	*49.1*
0	39.3	39.3	0	40.1	40.1	0	33.0	33.0	*0*	*45.0*	*45.0*	*0*	*45.0*	*45.0*
0	0	0	0	0	0	0	0	0	*0*	*0*	*0*	*0*	*0*	*0*
0.3	4.0	4.3	0.3	4.5	4.8	0.3	5.0	5.3	*0.5*	*8.0*	*8.5*	*0.5*	*8.0*	*8.5*
25.0	115.2	140.2	21.0	106.2	127.2	19.0	60.2	79.2	*25.0*	*80.5*	*105.5*	*25.0*	*80.5*	*105.5*
192.2	**437.9**	**630.1**	**190.5**	**417.9**	**608.4**	**192.9**	**367.2**	**560.1**	***231.8***	***421.5***	***653.3***	***231.8***	***424.5***	***656.3***
4.1	35.0	39.1	4.1	37.1	41.2	4.1	37.6	41.7	*5.0*	*42.0*	*47.0*	*5.0*	*42.0*	*47.0*
20.1	37.9	58.0	20.5	38.6	59.1	20.9	39.6	60.5	*25.0*	*61.0*	*86.0*	*25.0*	*61.0*	*86.0*
35.0	130.1	165.1	35.2	135.0	170.2	35.4	141.0	176.4	*39.0*	*166.0*	*205.0*	*39.0*	*166.0*	*205.0*
0	6.4	6.4	0	7.0	7.0	0	7.0	7.0	*0*	*10.0*	*10.0*	*0*	*10.0*	*10.0*
18.2	51.2	69.4	19.5	56.0	75.5	20.5	60.0	80.5	*31.5*	*71.5*	*103.0*	*32.0*	*71.5*	*103.5*
8.5	51.0	59.5	8.5	51.0	59.5	8.8	53.0	61.8	*10.0*	*160.0*	*170.0*	*10.0*	*160.0*	*170.0*
300.0	345.0	645.0	307.0	345.0	652.0	312.0	350.0	662.0	*340.0*	*353.0*	*693.0*	*340.0*	*353.0*	*693.0*
14.0	58.0	72.0	14.0	55.0	69.0	14.9	55.0	69.9	*17.0*	*60.0*	*77.0*	*17.0*	*60.0*	*77.0*
399.9	**714.6**	**1114.5**	**408.8**	**724.7**	**1133.5**	**416.6**	**743.2**	**1159.8**	***467.5***	***923.5***	***1391.0***	***468.0***	***923.5***	***1391.5***
592.1	**1152.5**	**1744.6**	**599.3**	**1142.6**	**1741.9**	**609.5**	**1110.4**	**1719.9**	***699.3***	***1345.0***	***2044.3***	***699.8***	***1348.0***	***2047.8***

TABLE 3B:
WORLD CELLULOSIC FIBER PRODUCTION & PRODUCING CAPACITY BY COUNTRY (Continued)

THOUSAND METRIC TONS

COUNTRY	ACTUAL PRODUCTION											
	1979			1980			1981			1982		
	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL
U.S.A.	**169.4**	**252.4**	**421.8**	**161.3**	**204.3**	**365.6**	**138.6**	**210.7**	**349.3**	**103.6**	**161.0**	**264.6**
OTHER AMERICAS												
Argentina	5.1	4.7	9.8	2.0	1.5	3.5	1.0	0	1.0	1.6	0	1.6
Brazil	24.4	25.5	49.9	26.0	25.3	51.3	21.0	25.3	46.3	20.8	24.2	45.0
Canada	14.1	31.3	45.4	14.0	30.0	44.0	13.5	28.2	41.7	9.5	28.0	37.5
Chile	1.0	3.0	4.0	1.0	3.0	4.0	1.0	3.0	4.0	1.0	3.2	4.2
Colombia	3.4	0	3.4	2.4	0	2.4	1.8	0	1.8	1.8	0	1.8
Cuba	2.4	3.8	6.2	2.2	3.8	6.0	2.2	3.8	6.0	2.1	3.6	5.7
Mexico	17.1	10.3	27.4	16.8	11.0	27.8	16.6	11.3	27.9	14.1	5.4	19.5
Peru	1.3	0	1.3	1.5	0	1.5	1.3	0	1.3	1.0	0	1.0
Uruguay	1.4	0	1.4	1.3	0	1.3	1.0	0	1.0	0.6	0	0.6
Venezuela	3.0	0	3.0	2.8	0	2.8	2.8	0	2.8	1.2	0	1.2
Total Other Americas	**73.2**	**78.6**	**151.8**	**70.0**	**74.6**	**144.6**	**62.2**	**71.6**	**133.8**	**53.7**	**64.4**	**118.1**
JAPAN	**114.3**	**290.4**	**404.7**	**119.3**	**278.0**	**397.3**	**118.7**	**273.5**	**392.2**	**120.5**	**258.8**	**379.3**
OTHER AFRICA, ASIA & OCEANIA												
Bangladesh	4.1	0	4.1	3.5	0	3.5	3.0	0	3.0	2.5	0	2.5
China, P.R.O.	68.0	85.0	153.0	75.0	95.0	170.0	80.0	105.0	185.0	80.0	105.0	185.0
Egypt	5.8	4.2	10.0	6.0	4.0	10.0	6.0	4.0	10.0	7.0	4.5	11.5
India	60.5	92.2	152.7	57.7	74.7	132.4	55.9	94.5	150.4	48.6	52.8	101.4
Indonesia	0	0	0	0	0	0	0	0	0	0	18.1	18.1
Iraq	2.9	5.4	8.3	3.0	5.5	8.5	3.0	5.5	8.5	3.0	5.5	8.5
Korea, Rep. of	13.2	10.4	23.6	12.4	15.0	27.4	12.8	13.9	26.7	9.9	5.8	15.7
Pakistan	2.0	0	2.0	2.7	0	2.7	2.4	0	2.4	2.5	0	2.5
Taiwan	3.0	70.0	73.0	3.0	75.3	78.3	3.0	96.7	99.7	3.3	89.5	92.8
Thailand	0	15.1	15.1	0	16.4	16.4	0	16.4	16.4	0	15.5	15.5
Total Other A., A. & O.	**159.5**	**282.3**	**441.8**	**163.3**	**285.9**	**449.2**	**166.1**	**336.0**	**502.1**	**156.8**	**296.7**	**453.5**
WORLD TOTAL	**1176.4**	**2194.9**	**3371.3**	**1161.4**	**2081.0**	**3242.4**	**1104.2**	**2099.9**	**3204.1**	**1023.4**	**1922.3**	**2945.7**

ACTUAL PRODUCTION									PRODUCING CAPACITY					
1983			1984			1985			1986			1987		
Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL
119.7	**170.6**	**290.3**	**108.4**	**176.4**	**284.8**	**93.0**	**160.1**	**253.1**	***110.7***	***210.9***	***321.6***	***110.7***	***210.9***	***321.6***
1.7	0	1.7	1.8	1.5	3.3	1.5	1.5	3.0	*9.0*	*10.0*	*19.0*	*9.0*	*10.0*	*19.0*
18.4	22.0	40.4	17.7	29.0	46.7	20.1	26.5	46.6	*22.2*	*31.2*	*53.4*	*22.2*	*31.2*	*53.4*
10.0	30.0	40.0	10.0	33.9	43.9	8.0	26.9	34.9	*14.5*	*38.0*	*52.5*	*14.5*	*38.0*	*52.5*
1.0	3.2	4.2	1.2	3.7	4.9	1.3	3.8	5.1	*1.5*	*5.4*	*6.9*	*1.5*	*5.4*	*6.9*
1.8	0	1.8	1.8	0	1.8	1.8	0	1.8	*3.5*	*0*	*3.5*	*3.5*	*0*	*3.5*
2.0	3.5	5.5	2.0	3.5	5.5	2.1	3.5	5.6	*3.0*	*5.0*	*8.0*	*3.0*	*5.0*	*8.0*
10.8	5.0	15.8	11.6	4.0	15.6	12.2	0	12.2	*13.5*	*0*	*13.5*	*13.7*	*0*	*13.7*
1.0	0	1.0	1.7	0	1.7	1.7	0	1.7	*1.7*	*0*	*1.7*	*1.7*	*0*	*1.7*
1.0	0	1.0	1.0	0	1.0	1.0	0	1.0	*1.0*	*0*	*1.0*	*1.0*	*0*	*1.0*
1.5	0	1.5	1.9	0	1.9	2.1	0	2.1	*2.4*	*0*	*2.4*	*2.4*	*0*	*2.4*
49.2	**63.7**	**112.9**	**50.7**	**75.6**	**126.3**	**51.8**	**62.2**	**114.0**	***72.3***	***89.6***	***161.9***	***72.5***	***89.6***	***162.1***
116.8	**271.0**	**387.8**	**110.8**	**266.6**	**377.4**	**104.6**	**244.9**	**349.5**	***136.4***	***314.4***	***450.8***	***136.4***	***314.4***	***450.8***
2.5	1.0	3.5	2.5	1.0	3.5	2.7	1.0	3.7	*6.5*	*5.0*	*11.5*	*6.5*	*5.0*	*11.5*
85.0	100.0	185.0	87.0	108.0	195.0	87.0	112.0	199.0	*100.0*	*115.0*	*215.0*	*100.0*	*115.0*	*215.0*
7.0	4.6	11.6	7.0	4.6	11.6	7.0	4.7	11.7	*7.0*	*5.4*	*12.4*	*7.0*	*5.4*	*12.4*
46.2	69.9	116.1	41.7	100.1	141.8	46.9	95.0	141.9	*70.0*	*128.8*	*198.8*	*70.0*	*128.8*	*198.8*
0	34.1	34.1	0	41.3	41.3	0	40.0	40.0	*0*	*47.0*	*47.0*	*0*	*47.0*	*47.0*
3.0	5.5	8.5	3.0	5.5	8.5	3.0	5.5	8.5	*3.5*	*6.5*	*10.0*	*3.5*	*6.5*	*10.0*
12.9	0	12.9	12.8	0	12.8	13.8	0	13.8	*14.2*	*28.1*	*42.3*	*14.2*	*28.1*	*42.3*
2.7	0	2.7	3.1	0	3.1	3.2	0	3.2	*3.3*	*0*	*3.3*	*3.3*	*0*	*3.3*
3.0	98.5	101.5	2.5	125.5	128.0	2.5	119.5	122.0	*4.3*	*130.0*	*134.3*	*4.3*	*130.0*	*134.3*
0	17.5	17.5	0	18.0	18.0	0	19.0	19.0	*0*	*18.2*	*18.2*	*0*	*20.8*	*20.8*
162.3	**331.3**	**493.4**	**159.6**	**404.0**	**563.6**	**166.1**	**396.7**	**562.8**	***208.8***	***484.0***	***692.8***	***208.8***	***486.6***	***695.4***
1040.1	**1988.9**	**3029.0**	**1028.8**	**2065.2**	**3094.0**	**1025.0**	**1974.3**	**2999.3**	***1227.5***	***2443.9***	***3671.4***	***1228.2***	***2449.5***	***3677.7***

TABLE 4:
RAYON VS. ACETATE FILAMENT YARN
PRODUCTION & PRODUCING CAPACITY BY COUNTRY

THOUSAND METRIC TONS

COUNTRY	ACTUAL PRODUCTION											
	1979			1980			1981			1982		
	H	R&C	A	H	R&C	A	H	R&C	A	H	R&C	A
WESTERN EUROPE												
Austria	8	4	0	11	4	0	11	5	0	9	5	0
Belgium/Netherlands	14	15	7	15	16	6	16	16	6	15	16	6
France	9	9	0	8	9	0	2	9	0	0	9	0
West Germany[c]	33	23	2	40	24	1	39	25	1	40	21	+
Italy[c]	11	9	18	11	5	21	11	5	19	9	3	19
Spain	5	5	3	6	4	3	6	3	3	4	4	3
United Kingdom	11	10	38	1	2	34	0	0	27	0	0	24
Other[a]	0	15	0	0	12	0	0	11	0	0	9	0
Total Western Europe	**91**	**90**	**68**	**92**	**76**	**65**	**85**	**74**	**56**	**77**	**67**	**52**
EASTERN EUROPE												
Bulgaria	0	3	0	0	3	0	0	4	0	0	4	0
Czechoslovakia	10	12	0	9	11	0	8	10	0	8	12	0
Germany, D.R.	13	22	0	14	23	0	14	23	0	13	21	0
Poland	7	20	0	7	18	0	5	15	0	4	15	0
Romania	6	4	0	6	4	0	6	4	0	5	3	0
U.S.S.R.[c]	163	80	55	165	85	55	165	80	55	160	80	54
Yugoslavia	7	9	0	7	8	0	7	8	0	6	7	0
Total Eastern Europe	**206**	**150**	**55**	**208**	**152**	**55**	**205**	**144**	**55**	**196**	**142**	**54**
U.S.A.[c]	**19**	**7**	**143**	**14**	**7**	**140**	**15**	**7**	**117**	**9**	**6**	**88**
OTHER AMERICAS												
Argentina	1	3	1	1	1	+	0	+	1	0	0	2
Brazil	7	15	3	6	16	4	4	14	3	4	15	2
Canada	0	0	14	0	0	14	0	0	13	0	0	10
Chile	0	1	0	0	1	0	0	1	0	0	1	0
Colombia	0	0	4	0	0	2	0	0	2	0	0	2
Cuba	2	+	0	2	+	0	2	+	0	2	+	0
Mexico	3	6	8	3	6	8	3	6	8	3	5	6
Peru	0	+	1	0	0	2	0	0	1	0	0	1
Uruguay	0	0	1	0	0	1	0	0	1	0	0	1
Venezuela	0	0	3	0	0	3	0	0	3	0	0	1
Total Other Americas	**13**	**25**	**35**	**12**	**24**	**34**	**9**	**21**	**32**	**9**	**21**	**25**
JAPAN[c]	**3**	**80**	**31**	**3**	**84**	**32**	**4**	**82**	**32**	**4**	**83**	**34**
OTHER AFRICA, ASIA & OCEANIA												
India	17	42	2	14	42	2	14	40	2	11	36	2
Pakistan	0	0	2	0	0	3	0	0	2	0	0	2
Rep. of Korea	0	11	2	0	10	2	0	11	2	0	8	2
Other[b]	0	84	0	0	90	0	0	95	0	0	97	0
Total A., A. & O.	**17**	**137**	**6**	**14**	**142**	**7**	**14**	**146**	**6**	**11**	**141**	**6**
TOTAL WORLD	**349**	**489**	**338**	**343**	**485**	**333**	**332**	**474**	**298**	**306**	**460**	**259**

H Means high tenacity (tire & industrial type) viscose rayon yarn.
R Means regular + intermediate tenacity viscose rayon yarn.
C Means cuprammonium rayon yarn.
A Means acetate + triacetate yarn.
a. Comprises Finland, Greece, Portugal, Switzerland and Turkey.
b. Comprises Bangladesh, People's Republic of China, Egypt, Iraq and Taiwan.
c. Produces both regular + intermediate rayon yarn and cuprammonium rayon yarn.

ACTUAL PRODUCTION									PRODUCING CAPACITY					
1983			1984			1985			1986			1987		
H	R&C	A	H	R&C	A	H	R&C	A	H	R&C	A	H	R&C	A
8	4	0	10	5	0	10	5	0	*11*	*5*	*0*	*11*	*5*	*0*
18	17	7	18	16	7	18	17	7	*19*	*18*	*8*	*19*	*18*	*8*
0	8	0	0	7	0	0	7	0	*0*	*10*	*0*	*0*	*10*	*0*
39	20	0	40	21	0	40	24	0	*43*	*26*	*0*	*43*	*26*	*0*
9	2	18	11	2	18	10	2	18	*12*	*7*	*20*	*12*	*7*	*20*
3	4	3	+	4	3	+	4	3	*8*	*5*	*4*	*8*	*5*	*4*
0	0	25	0	0	21	0	0	19	*0*	*0*	*25*	*0*	*0*	*25*
0	8	0	0	7	0	0	8	0	*0*	*11*	*0*	*0*	*11*	*0*
77	**63**	**53**	**79**	**62**	**49**	**78**	**67**	**47**	***93***	***82***	***57***	***93***	***82***	***57***
0	4	0	0	4	0	0	4	0	*0*	*5*	*0*	*0*	*5*	*0*
8	12	0	8	12	0	8	13	0	*11*	*14*	*0*	*11*	*14*	*0*
14	22	0	14	22	0	14	22	0	*15*	*24*	*0*	*15*	*24*	*0*
4	14	0	5	15	0	5	16	0	*9*	*23*	*0*	*9*	*23*	*0*
5	3	0	5	3	0	5	4	0	*6*	*4*	*0*	*6*	*4*	*0*
162	83	55	165	85	57	166	87	59	*170*	*100*	*70*	*170*	*100*	*70*
7	7	0	7	7	0	8	7	0	*8*	*9*	*0*	*8*	*9*	*0*
200	**145**	**55**	**204**	**148**	**57**	**206**	**153**	**59**	***219***	***179***	***70***	***219***	***179***	***70***
11	**6**	**103**	**13**	**6**	**90**	**9**	**6**	**78**	***21***	***8***	***82***	***21***	***8***	***82***
0	0	2	0	0	2	0	0	2	*0*	*6*	*3*	*0*	*6*	*3*
3	14	1	4	12	2	4	15	1	*5*	*16*	*1*	*5*	*16*	*1*
0	0	10	0	0	10	0	0	8	*0*	*0*	*14*	*0*	*0*	*14*
0	1	0	0	1	0	0	1	0	*0*	*1*	*0*	*0*	*1*	*0*
0	0	2	0	0	2	0	0	2	*0*	*0*	*4*	*0*	*0*	*4*
2	+	0	2	0	0	2	0	0	*3*	*0*	*0*	*3*	*0*	*0*
3	2	6	2	3	6	3	3	6	*3*	*4*	*7*	*3*	*4*	*7*
0	0	1	0	0	2	0	0	2	*0*	*0*	*2*	*0*	*0*	*2*
0	0	1	0	0	1	0	0	1	*0*	*0*	*1*	*0*	*0*	*1*
0	0	1	0	0	2	0	0	2	*0*	*0*	*2*	*0*	*0*	*2*
8	**17**	**24**	**8**	**16**	**27**	**9**	**19**	**24**	***11***	***27***	***34***	***11***	***27***	***34***
3	**82**	**32**	**2**	**78**	**31**	**2**	**74**	**28**	***10***	***92***	***35***	***10***	***92***	***35***
10	35	1	8	33	1	7	40	+	*21*	*46*	*3*	*21*	*46*	*3*
0	0	3	0	0	3	0	0	3	*0*	*0*	*3*	*0*	*0*	*3*
0	11	2	0	11	2	0	12	2	*0*	*12*	*2*	*0*	*12*	*2*
0	100	0	0	102	0	0	102	0	*0*	*121*	*0*	*0*	*121*	*0*
10	**146**	**6**	**8**	**146**	**6**	**7**	**154**	**5**	***21***	***179***	***8***	***21***	***179***	***8***
309	**459**	**273**	**314**	**456**	**260**	**311**	**473**	**241**	***375***	***567***	***286***	***375***	***567***	***286***

TABLE 5:
WORLD NONCELLULOSIC FIBER PRODUCTION & PRODUCING CAPACITY BY FIBER EXCEPT OLEFIN

THOUSAND METRIC TONS

FIBER & AREA	ACTUAL PRODUCTION																					PRODUCING CAPACITY					
	1979			1980			1981			1982			1983			1984			1985			1986			1987		
	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL
ACRYLIC+MODACRYLIC																											
West Europe	+	795	795	+	737	737	+	807	807	0	725	725	0	834	834	1	865	866	1	922	923	*1*	*1021*	*1022*	*1*	*1021*	*1022*
East Europe	0	213	213	0	217	217	0	211	211	0	213	213	0	222	222	0	232	232	0	254	254	*0*	*342*	*342*	*0*	*378*	*378*
U.S.A.	0	345	345	0	355	355	0	313	313	0	283	283	0	304	304	0	304	304	0	286	286	*0*	*264*	*264*	*0*	*278*	*278*
Other Americas	0	108	108	0	114	114	0	106	106	0	121	121	0	130	130	0	140	140	0	143	143	*0*	*198*	*198*	*0*	*213*	*213*
Japan	4	355	359	3	350	353	1	347	348	3	344	347	2	355	357	2	367	369	2	380	382	*6*	*425*	*431*	*6*	*425*	*431*
Other A, A. & O.	0	249	249	0	284	284	0	305	305	0	369	369	0	380	380	0	398	398	0	423	423	*0*	*581*	*581*	*0*	*581*	*581*
TOTAL	**4**	**2065**	**2069**	**3**	**2057**	**2060**	**1**	**2089**	**2090**	**3**	**2055**	**2058**	**2**	**2225**	**2227**	**3**	**2306**	**2309**	**3**	**2408**	**2411**	***7***	***2831***	***2838***	***7***	***2896***	***2903***
NYLON+ARAMID[a]																											
West Europe	571	148	719	521	128	649	521	129	650	465	107	572	486	117	603	496	133	629	522	142	664	*641*	*190*	*831*	*641*	*190*	*831*
East Europe	414	31	445	461	55	516	454	79	533	457	82	539	485	87	572	512	93	605	529	95	624	*638*	*109*	*747*	*644*	*109*	*753*
U.S.A.	808	426	1234	740	330	1070	717	341	1058	563	311	874	677	420	1097	715	379	1094	687	375	1062	*806*	*486*	*1292*	*833*	*507*	*1340*
Other Americas	205	23	228	208	23	231	181	20	201	182	21	203	180	22	202	209	22	231	224	16	240	*350*	*42*	*392*	*350*	*42*	*392*
Japan	296	17	313	300	18	318	282	19	301	264	19	283	271	18	289	288	19	307	291	24	315	*327*	*29*	*356*	*327*	*29*	*356*
Other A, A. & O.	332	3	335	365	2	367	393	3	396	379	4	383	398	5	403	452	6	458	485	7	492	*677*	*13*	*690*	*747*	*13*	*760*
TOTAL	**2626**	**648**	**3274**	**2595**	**556**	**3151**	**2548**	**591**	**3139**	**2310**	**544**	**2854**	**2497**	**669**	**3166**	**2672**	**652**	**3324**	**2738**	**659**	**3397**	***3439***	***869***	***4308***	***3542***	***890***	***4432***
POLYESTER																											
West Europe	407	445	852	359	407	766	378	449	827	393	428	821	387	454	841	435	487	922	454	495	949	*555*	*600*	*1155*	*555*	*600*	*1155*
East Europe	118	308	426	135	321	456	132	334	466	152	347	499	171	373	544	194	390	584	205	427	632	*322*	*631*	*953*	*323*	*647*	*970*
U.S.A.	779	1117	1896	663	1146	1809	712	1182	1894	550	887	1437	617	991	1608	544	994	1538	599	917	1516	*666*	*1210*	*1876*	*645*	*1234*	*1879*
Other Americas	214	164	378	223	166	389	210	163	373	186	158	344	202	189	391	225	222	447	228	228	456	*355*	*288*	*643*	*355*	*288*	*643*
Japan	314	318	632	305	321	626	310	321	631	314	314	628	310	320	630	327	320	647	329	323	652	*438*	*356*	*794*	*438*	*356*	*794*
Other A, A. & O.	386	556	942	409	672	1081	479	795	1274	536	840	1376	637	949	1586	778	1205	1983	934	1419	2353	*1337*	*1989*	*3326*	*1478*	*2159*	*3637*
TOTAL	**2218**	**2908**	**5126**	**2094**	**3033**	**5127**	**2221**	**3244**	**5465**	**2131**	**2974**	**5105**	**2324**	**3276**	**5600**	**2503**	**3618**	**6121**	**2749**	**3809**	**6558**	***3673***	***5074***	***8747***	***3794***	***5284***	***9078***
OTHER FIBERS[b] EXCEPT OLEFIN																											
West Europe	5	11	16	6	11	17	6	7	13	6	9	15	6	9	15	6	9	15	6	9	15	*8*	*12*	*20*	*8*	*12*	*20*
East Europe	5	7	12	+	4	4	1	3	4	1	3	4	+	3	3	1	4	5	1	4	5	*1*	*9*	*10*	*1*	*9*	*10*
U.S.A.	8	1	9	9	+	9	10	1	11	8	1	9	+	+	+	+	+	+	+	+	+	*14*	*0*	*14*	*14*	*0*	*14*
Other Americas	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	*2*	*0*	*2*	*1*	*0*	*1*
Japan	17	42	59	18	43	61	14	33	47	13	31	44	14	28	42	17	29	46	18	30	48	*32*	*103*	*135*	*32*	*103*	*135*
Other A, A. & O.	5	30	35	6	40	46	7	50	57	7	50	57	7	59	66	7	70	77	10	70	80	*15*	*37*	*52*	*15*	*37*	*52*
TOTAL	**41**	**91**	**132**	**40**	**98**	**138**	**39**	**94**	**133**	**36**	**94**	**130**	**28**	**99**	**127**	**32**	**112**	**144**	**36**	**113**	**149**	***72***	***161***	***233***	***71***	***161***	***232***
TOTAL FIBERS ABOVE																											
West Europe	983	1399	2382	886	1283	2169	905	1392	2297	864	1269	2133	879	1414	2293	938	1494	2432	983	1568	2551	*1205*	*1823*	*3028*	*1205*	*1823*	*3028*
East Europe	537	559	1096	596	597	1193	587	627	1214	610	645	1255	656	685	1341	707	719	1426	735	780	1515	*961*	*1091*	*2052*	*968*	*1143*	*2111*
U.S.A.	1595	1889	3484	1412	1831	3243	1439	1837	3276	1121	1482	2603	1294	1715	3009	1259	1677	2936	1286	1578	2864	*1486*	*1960*	*3446*	*1492*	*2019*	*3511*
Other Americas	420	295	715	432	303	735	392	289	681	369	300	669	383	341	724	435	384	819	453	387	840	*707*	*528*	*1235*	*706*	*543*	*1249*
Japan	631	732	1363	626	732	1358	607	720	1327	594	708	1302	597	721	1318	634	735	1369	640	757	1397	*803*	*913*	*1716*	*803*	*913*	*1716*
Other A, A. & O.	723	838	1561	780	998	1778	879	1153	2032	922	1263	2185	1042	1393	2435	1237	1679	2916	1429	1919	3348	*2029*	*2620*	*4649*	*2240*	*2790*	*5030*
WORLD TOTAL	**4889**	**5712**	**10601**	**4732**	**5744**	**10476**	**4809**	**6018**	**10827**	**4480**	**5667**	**10147**	**4851**	**6269**	**11120**	**5210**	**6688**	**11898**	**5526**	**6989**	**12515**	***7191***	***8935***	***16126***	***7414***	***9231***	***16645***

Y means yarn+monofilaments. **S** means staple+tow+fiberfill. The regional totals here are the same as those on pages 104 - 107.

a. U.S.A. nylon producing capacity data do not include aramid.

b. Other fibers are alginate, azlon, spandex or elastomer, saran, TFE-fluorocarbon, vinal and vinyon. U.S.A. production data do not include spandex in 1983 through 1985.

TABLE 6:
WORLD GLASS FIBER PRODUCTION & PRODUCING CAPACITY

THOUSAND METRIC TONS

COUNTRY	PRODUCTION							CAPACITY	
	1979	1980	1981	1982	1983	1984	1985	1986	1987
WEST EUROPE	310	300	277	250	290	300	320	*375*	*375*
EAST EUROPE[a]								*50*	*50*
U.S.A.	460	393	472	408	530	632	700	*839*	*872*
OTHER AMERICAS	28	30	31	35	37	39	51	*60*	*60*
JAPAN	178	167	174	198	206	249	273	*314*	*314*
OTHER A,A & O[b]	12	13	14	12	14	14	28	*31*	*30*
TOTAL ABOVE	**988**	**903**	**968**	**903**	**1077**	**1234**	**1372**	***1683***	***1701***
CHINA P.R.C.	NA	NA	NA	30	30	40	50	*60*	*60*
U.S.S.R.	NA	NA	NA	65	65	75	85	*110*	*110*

Glass fiber is defined on page 116 of this issue. The glass fiber producing capacity, in operable condition, is shown on an annual rate basis as of March 1986 (1986) and December 1987 (1987).

NA Not Available

a. The data for East Europe do not include estimates for the U.S.S.R.

b. The Other Africa, Asia & Oceania countries are Australia, India and South Africa.

TABLE 7:
ESTIMATED WORLD CIGARETTE TOW PRODUCTION

THOUSAND METRIC TONS

AREA	1979	1980	1981	1982	1983	1984	1985
EUROPE[a]	74	74	81	81	80	80	83
U.S.A.	199	220	226	216	211	187	210
OTHER AMERICAS[b]							
ASIA[c]	41	41	42	42	43	47	44
WORLD TOTAL	**314**	**335**	**349**	**339**	**334**	**314**	**347**

a. Belgium, Fed. Rep. of Germany, U.S.S.R. & United Kingdom.

b. Brazil, Canada, Colombia, Mexico & Venezuela.

c. Japan and Rep. of Korea.

TABLE 8:
WORLD ACETATE STAPLE PRODUCTION & CAPACITY

THOUSAND METRIC TONS

COUNTRY	PRODUCTION							CAPACITY	
	1979	1980	1981	1982	1983	1984	1985	1986	1987
U.K.	0.5	0.3	0.2	0.2	0.2	0.2	0.2	*0.5*	*0.5*
U.S.A.	3.2	3.2	1.8	0.5	0.6	0.2	0.2	*0.2*	*0.2*
CANADA	0	0	0	0	0	0	0	*0*	*0*
INDIA	0.4	0.1	0.3	0.3	0.2	0.2	+	*0.8*	*0.8*
WORLD TOTAL	**4.1**	**3.6**	**2.3**	**1.0**	**1.0**	**0.6**	***0.4***	***1.5***	***1.5***

TABLE 9:
WORLD OLEFIN FIBER PRODUCTION

THOUSAND METRIC TONS

COUNTRY	1979	1980	1981	1982	1983	1984	1985
WEST EUROPE							
BENELUX	56	57	66	73	75	77	78
DENMARK	15	14	14	13	14	14	15
FRANCE	24	27	28	26	29	29	29
WEST GERMANY	57	53	56	55	61	61	62
IRELAND (EIRE)	6	8	9	8	9	9	9
ITALY	61	57	62	59	67	71	71
UNITED KINGDOM	82	80	81	76	80	80	81
SUBTOTAL EEC	**301**	**297**	**316**	**310**	**335**	**341**	**345**
AUSTRIA	19	18	17	19	20	21	22
FINLAND	3	3	3	3	4	4	4
GREECE/CYPRUS	10	9	9	9	10	9	9
NORWAY	4	4	4	4	5	4	4
PORTUGAL	38	40	38	38	39	39	40
SPAIN	37	38	38	36	36	37	37
SWEDEN	3	3	3	3	4	4	4
SWITZERLAND	3	3	3	3	4	4	4
TURKEY	5	5	5	5	6	6	6
TOTAL WEST EUROPE	**423**	**420**	**436**	**430**	**483**	**489**	**475**
EAST EUROPE							
CZECHOSLOVAKIA	12	11	11	11	12	12	12
HUNGARY	13	15	16	16	16	16	17
POLAND	13	14	15	12	15	16	16
U.S.S.R.	15	15	15	14	18	20	22
U.S.A.							
YARN+MONOFIL	151	147	145	134	168	175	192
STAPLE	54	52	64	63	86	113	137
FILM FIBER	139	140	148	131	149	154	233
OTHER AMERICAS							
ARGENTINA	11	10	10	11	12	12	13
BRAZIL	39	40	40	39	36	39	39
CANADA	32	30	30	28	32	30	32
CHILE	1	1	1	1	1	1	1
EL SALVADOR							
GUATEMALA	2	2	2	2	3	3	3
HONDURAS							
MEXICO	20	22	23	23	25	26	26
NICARAGUA	1	1	1	1	1	1	1
PERU	5	5	6	6	6	6	6
URUGUAY	1	1	2	1	2	2	2
JAPAN							
YARN+MONOFIL	18	16	14	14	14	14	14
STAPLE	29	27	26	28	29	32	35
FILM FIBER	NA	NA	NA	NA	NA	NA	NA
OTHER AFRICA, ASIA & OCEANIA							
AUSTRALIA	20	20	20	19	21	22	23
KOREA, REP. OF	8	4	3	2	1	1	1
PHILIPPINES	2	2	2	3	3	3	3
SOUTH AFRICA	3	3	3	3	5	5	5
TAIWAN	46	50	53	56	60	63	71
OTHER	+	+	+	+	1	1	1

The olefin data shown comprise (a) the tonnages of yarn, monofilaments and staple plus film fiber reported by official sources, such as governments, trade associations or other statistical agents plus (b) estimates of the additional tonnages of olefin fiber not included in the aforementioned data. Note text on page 143.

No attempt is made to strike a world total inasmuch as data are incomplete for a number of countries, particularly in Latin America, East Europe and Other Africa, Asia & Oceania.

1986 WORLD DIRECTORY OF MAN-MADE FIBER PRODUCERS

NOTES & DEFINITIONS

This directory of producers lists each country seperately and divides them into the following categories:

(1) Cellulosic plus Noncellulosic Fibers
(2) Olefin fiber
(3) Textile glass fiber.

The locality shown represents a plant site.

The generic fiber names used in this survey are those established by the U.S. Federal Trade Commission (FTC). The *italicized* words are trademarks. All other fiber names are generic and appear in regular type.

Indicates a company producing olefin fiber as well as other man-made fiber(s). For example, Brasil Viscose S.A. produces olefin fiber in Brazil as well as nylon and rayon. The nylon and rayon entries for this company are in one section and the olefin entry is shown in the Olefin Fiber section.

* Indicates a new plant, in the planning stage or under construction, or a new facility for producing a new product at an existing plant. Such facilities are not expected to be operable before 1987 or later.

Yarn means filament yarn.
Monofil means an extruded monofilament and may be either a round or rectangular (ribbon) cross-section. Monofilaments for bristles are excluded.
Film includes **Slit**: tape produced by slitting an already attenuated wide sheet of olefin film; and **Split:** fibrillated slit film.
Not included in this survey is the slit film used for decorative or tying ribbon and such.
Captive means that most or all of the fiber produced is consumed by the company in a vertical operation.

GENERIC NAMES & TRADEMARKS

The following are generic names, in bold type, and a brief description of the fibers covered by each name is shown in regular type.

GLASS FIBER

This fiber is made in two primary forms: continuous strand and staple sliver. Continuous strand is drawn fiber (i.e., from a textile-type bushing), while staple sliver, which is produced in relatively small amounts, is a blown fiber.

Glass fiber is produced and sold as filament yarn, strand, roving, mat, chopped strand, milled fiber and staple yarn & sliver. In addition, there are two primary uses for glass fiber: Textile, used by textile mills in conventional constructions (e.g., drapery and tire cord) or Non-Textile, used for nonconventional constructions (e.g., reinforced plastics and roofing shingles).

For additional information, see the definitions on page 231 of the November 1985 ***Organon*** and page 35 of the March/April 1984 ***Organon.***

CELLULOSIC (ARTIFICIAL) FIBERS

Acetate: Cellulose acetate. Cigarette filtration tow is excluded.
Triacetate: Cellulose acetate, wherein not less than 92% of the hydroxyl groups are acetylated.
Rayon: Regenerated cellulose, including substitutions for not more than 15% of the hydrogens of the hydroxyl groups. Includes high wet modulus fiber.
Cupra: Cuprammonium rayon.
The viscose rayon yarns are identified as **ind** (industrial or high tenacity yarn) and **reg** (regular or textile yarn).

NONCELLULOSIC (SYNTHETIC) FIBERS

Acrylic: At least 85% acrylonitrile by weight.
Modacrylic: 35% to 84% acrylonitrile by weight, except when it qualifies as rubber.
Azlon: Regenerated natural protein.
Nylon: A long-chain synthetic polyamide in which less than 85% of the amide linkages are attached directly to two aromatic rings. The types are identified as 6, 66, etc. Where a company produces both type 6 and 66, the designation 6/66 is used.
Aramid: A long-chain synthetic polyamide in which at least 85% of the amide linkages are attached directly to two aromatic rings. In this survey, any aramid data are included with nylon.
Olefin: At least 85% ethylene, propylene or other olefin units by weight, except amorphous (noncrystalline) polyolefins qualifying as rubber. **E** means Polyethylene and **P** means Polypropylene. Also see adjoining notes on olefin fiber.
Polyester: At least 85% by weight of an ester of a substituted aromatic carboxylic acid, including but not restricted to substituted terephthalate units, and parasubstituted hydroxybenzoate units.
Saran: At least 80% vinylidene chloride by weight.
Spandex: At least 85% of segmented polyurethane.
Vinal: At least 50% by weight vinyl alcohol and wherein the vinyl alcohol plus acetal units are at least 85% by weight.
Vinyon: At least 85% vinyl chloride by weight.

Other man-made fibers included in this survey, but not listed by the FTC, are **Polycarbonate** (U.S.A.), **Polychlal** (Japan), **Promix** (Japan) and **TFE-&FEP-fluorocarbon** (Fluoro)(Japan, U.S.A. & U.S.S.R.).

Not covered in this survey are fibers which would fall under the FTC's generic designations of rubber, lastrile, metallic and novoloid. Fibers falling under the FTC designations of anidex and nytril are no longer produced.

Carbon fibers are not included in this survey.

International Standard #2076, "Generic Names of Man-Made Fibres," as established by the International Organization for Standardization, lists some 23 names, of which the following are similar to the FTC designations: cupro, viscose, acetate, triacetate, acrylic, modacrylic, nylon or polyamide, polyester and glass. The IOS also lists modal (regenerated cellulose obtained by processes giving a high tenacity and a high wet modulus), alginate (metallic salts of alginic acid), chlorofibre (similar to the FTC's saran and vinyon), elastane (similar to the FTC's spandex), elastodiene, fluorofibre, polycarbamide, polyethylene & polypropylene (similar to the FTC's olefin), polyurethane, trivinyl and vinylal (similar to the FTC's vinal).

ALBANIA

(Producer not yet known)
Acrylic (staple)
Polyester (yarn & staple*)

ARGENTINA

COAFI S.A.
Polyester Buenos Aires (yarn)

DUCILO S.A.I.C.
Nylon 66 Berazategui & Mercedes *Nylon Ducilo* (yarn)
Spandex Mercedes (fused multifil or coalesced monofil)

HISISA ARGENTINA S.A.I.C.I.F.
Acrylic Baradero *Cashmilon* (staple)

MANUFACTURAS DE FIBRAS SYNTETICAS (formerly Petroquimica Sudamericana)
Nylon 6 Olmos - Lapi (yarn)
Polyester Olmos - Lapi (yarn & staple)

MITEXTIL S.A.
Nylon 6 Buenos Aires (yarn)

M. NAHMIAS S.A.C.I.
Polyester Buenos Aires (yarn)

NICIEZA y TAVERNA HNOS. S.A.
Nylon 6 Chivilcoy *Gnlon* (monofil)

RHODIA ARGENTINA QUIMICA e TEXTIL
Acetate Quilmes (yarn)
Polyester Quilmes *Tergal* (yarn)

SOCIEDAD NUEVAS INDUSTRIAS ARGENTINAS FIBRAS ARTIFICIALES S.A.I.C.F.I. (SNIAFA)
Nylon 6 Hernández-La Plata *Snialon* (yarn)
Rayon Plátanos (reg yarn & staple)

SUDAMTEX S.A. TEXTIL SUDAMERICANA
Polyester Azul *Acrocel* (staple)

VALENCIANA ARGENTINA S.A.
Nylon 6 Buenos Aires (yarn)

OLEFIN FIBER

AGAPOL S.A. (P yarn)

MANUFACTURA FORTI ARGENTINA S.A.C.I.A.F.I. Buenos Aires (P yarn & staple)

PANAMERICA DE PLASTICOS S.A.I.C. Olivos (P staple)

PETROQUIMICA Cuyo, Mondoza (P yarn)

TEXTILYUTE S.A.I.C. Isidro Casanova (P film)

VINISA S.A.I.C. Buenos Aires *Rafistal, Strofil* (E & P monofil)

GLASS FIBER

VIDRIERIA ARGENTINA S.A. (VASA) Llavallol *Texover*

AUSTRALIA

FIBREMAKERS LTD.
Biconstituent Mulgrave, Victoria *Front Runner* (melded fabric)
Nylon 66 Bayswater, Victoria *Bri-Nylon* (yarn & monofil), Penrith, N.S.W. (tire cord)
Polyester Bayswater *Terylene* (yarn, staple & tow)

UNITED CARPET MILLS PTY. LTD.
Nylon 6 Thomastown, Victoria *Unilon* (yarn)
Polyester Thomastown (yarn)

In addition to the above, VILENE AUSTRALIA reportedly produces spunbonded products at Minto, N.S.W.; these are believed to be principally based on cellulosic fiber, but some polypropylene may be used.

OLEFIN FIBER

AMOCO FABRICS & FIBERS COMPANY, PATCHOGUE PLYMOUTH DIVISION Liverpool, N.S.W. *Poly Bac, Propex* (P film)

SARLON INDUSTRIES PTY. LTD Punchbowl, N.S.W. (E & P monofil & film)

OLEFIN FILM FIBER, only

A. ABRAHAMS & SONS PTY. LTD. Clayton, Victoria (*Koala, Polytex*)

CORDEX INDUSTRIES PTY. LTD. Gladesville, N.S.W.

GEO. KINNEAR & SONS PTY. LTD. Footscray, Victoria (*Emu*)

H. J. PENNO Adelaide, South Australia

TAPEX PTY. LTD. Sydney, N.S.W.

GLASS FIBER

ACI FIBREGLASS, A Unit of ACI Australia, Ltd. Dandenong, Victoria

AUSTRIA

AUSTRIA FASERWERKE G.m.b.H.
Polyester Lenzing *Trevira* (staple)

CHEMIEFASER LENZING A.G.•
Fluoro Lenzing (yarn & staple)
Rayon Lenzing (staple)

GLANZSTOFF AUSTRIA G.m.b.H. (formely Enka-Austria)
Rayon St. Pölten (ind & reg yarn)

OLEFIN FIBER

CHEMIE LINZ A.G. Linz *Asota, Linz PP-Multifil, Linz PP-Viles* (P yarn, staple & spunbonded)

OLEFIN FILM FIBER, only

CHEMIEFASER LENZING A.G. Lenzing

M. TEUFELBERGER Wels

SEUTTER Unter Eggendorf

BANGLADESH

ASHUGANJ PETROCHEMICAL COMPLEX
Acrylic — Ashuganj* (staple)

BANGLADESH CHEMICAL INDUSTRIES
Rayon — (staple)

KARNAPHULI RAYON AND CHEMICALS LIMITED
Rayon — Chandraghona, Chittagong (reg yarn & staple*)

PYLON INDUSTRIES LIMITED
Nylon 6 — Fouzdarhat Industrial Estate, Chittagong *Pylon* (yarn)

BELGIUM

BAYER ANTWERPEN N.V.
Nylon 6 — Antwerpen *Dorix* (staple)

BEAULIEU-NYLON S.A. •
Nylon 6 — Kruishoutem, East Flanders (yarn & staple)

CELANESE S.A.
Acetate — Lanaken, Limburg (yarn)
Triacetate — Lanaken (yarn)

FABELTA NINOVE N.V.
Rayon — Ninove, East Flanders (reg yarn)

FABELTA ZWIJNAARDE S.A.
Nylon 66 — Zwijnaarde, East Flanders *Fabelnyl* (yarn)

OLEFIN FIBER

DELOTEX (P staple)

N.V. FIBRILO Zele, East Flanders (P staple & film)

S.A. LA LOKEROISE Lokeren, East Flanders *Alpha Carpet, Delta Carpet* (P yarn & staple)

OSTEND STORES & ROPEWORKS S.A. Ostend, West Flanders

POLYFIL N.V. (Subsidiary of Beaulieu) Wielsbeke (P yarn)

T.T.C. POLYOLEFINS S.A. Overpelt, Limburg (P monofil)

OLEFIN FILM FIBER, only

N.V. JONCKVANSTEEN, Passendale

S.A. PHORMIUM, Zele, East Flanders

POLYTEXCO S.P.R.L., Beveren, Kortryk

S.A. U.C.O., Ledeberg, Gent

GLASS FIBER

N.V. BAYER S.A., Antwerpen

OWENS-CORNING FIBERGLAS EUROPE S.A. Battice, Liége *Fiberglas*

Cellulosic production and capacity data are combined with the Netherlands on page 108-109. Noncellulosic production and capacity data are combined with the Netherlands and Luxembourg under "Benelux" on page 104-105.

BOLIVIA

TEXTURBOL TEXTURIZADORA BOLIVIANA
Polyester — La Paz (yarn)

BRAZIL

ARTEPESCA - S.A. ARTIGOS DE PESCA DO NORDESTE •
Nylon 6 — Igarassu, Pernambuco (monofil)

BANYLSA TECELAGEM DO BRASIL S.A.
Nylon 6 — Aratú, Bahia (yarn)
Polyester — Aratú *Fio Banylsa Poliester* (yarn)

BRASIL VISCOSE S.A. •
Nylon 6 — Jundiapeba, São Paulo *Giorgilon* (staple)
Rayon — Jundiapeba (staple)

CELANESE DO BRASIL - FIBRAS QÚIMICAS LTDA.
Polyester — Pocos de Caldas, Minas Gerais *Fortrel* (staple)

CIA. BRASILEIRA DE SINTÉTICOS
Nylon 6 — Osasco (yarn)
Polyester — Osasco *Trevira* (yarn)

CIA. NITRO QÚIMICA BRASILEIRA
Rayon — São Miguel Paulista, São Paulo (reg yarn)

COBAFI - CIA. BAHIANA DE FIBRAS
Nylon 6 — Camaçari, Bahia (yarn)
Polyester — Camaçari (yarn)

DE MILLUS S.A. INDUSTRIA E COMÉRCIO
Nylon 6 — Rio de Janeiro *Demilon* (yarn)

DU PONT S.A. INDÚSTRIAS QÚIMICAS
Spandex — Paulinia, São Paulo *Lycra* (fused multifil)

EQUIPESCA - EQUIPAMENTOS DE PESCA S.A.
Nylon 6 — Campinas, São Paulo (monofil)

FIÁÇAO GRASILEIRA DE RAYON - FIBRA S.A.
Nylon 6 — Americana & Osasco, São Paulo *Lilion* (yarn)
Polyester — São Paulo (yarn)
Rayon — Americana (reg yarn & staple)

FISIBA - FÍBRAS SINTÉTICAS DA BAHIA S.A.
Acrylic — Camacari, Bahia *Triana* (staple)

INDUSTRIAS MATARAZZO DE FIBRAS SINTÉTICAS S.A.
Nylon 6 — São José dos Campos, São Paulo (yarn)

MANAP - MANUFATURA NACIONAL DE PLÁSTICOS •
Nylon 6 — Osasco, São Paulo *Caicara* (monofil)

MARCATTO S.A. IND. E COM. •
Nylon 6 — Jaraguá do Sul, Santa Catarina (monofil)

MAZZAFERRO POLIMEROS E FIBRAS SINTÉTICAS LTDA.
Nylon 6 — São Bernardo do Campo, São Paulo *Grilon, Trilon* (yarn & monofil)
Polyester — São Bernardo do Campo, São Paulo (monofil)

MONOFIL - CIA. INDUSTRIAL DE MONOFILAMENTOS •
Nylon 6 — São Paulo, São Paulo (monofil)

NOVELSPUMA - ESPUMA DE NYLON S.A.
Nylon 6 — São Paulo, São Paulo (yarn)

BRAZIL (continued)

POLYENKA S.A.
Polyester — Americana, São Paulo *Diolen* (yarn)

POLYNOR S.A. INDÚSTRIA E COMÉRCIO DE FIBRAS SINTETICAS DA PARÁIBA
Polyester — João Pessoa, Paraiba *Amilon, Polynor* (yarn & staple)

RHODIA S.A.
Acetate — Santo André, São Paulo (yarn)
Acrylic — São José dos Campos, São Paulo *Crylor* (staple)
Nylon 66 — Santo André *Dropnyl, Rhodianyl* (yarn & staple)
São Bernardo do Campo, São Paulo *Celtral BCF* (yarn)
Polyester — Santo André *Dropgal-Tergal, Tergal* (yarn & staple), São José dos Campos *Bidim* (spunbonded)
São Bernardo do Campo *Fortrel* (yarn)
Rayon — São José dos Campos (ind yarn & staple)

RHODIA NORDESTE S.A.
Polyester — Cabo, Pernambuco *Dropgal, Tergal* (yarn & staple)

SEARA IND. TÉXTIL LTDA. •
Nylon 6 — Londrina, Paraná (monofil)

SPUMAR S.A. INDÚSTRIA E COMÉRCIO •
Nylon 6 — São Paulo (yarn)

OLEFIN FIBER

ARTEPESCA - S.A. ARTIGOS DE PESCA DO NORDESTE
Igarassu, Pernambuco (E & P monofil)

BRASIL VISCOSE S.A. Jundiapeba, São Paulo (P staple)

ETRÚRIA S.A. INDÚSTRIA DE FIBRAS E FIOS SINTÉTICOS
Mairinque, São Paulo (P staple)

FADEMAC - FABRICA DE MATERIAIS DE CONSTR. S.A.
Jacarei, São Paulo (P staple)

FITESA - FIÁÇAO TÉXTIL DE EMBALAGENS PLÁSTICAS S.A.
Guaiba, Rio Grande do Sul (P staple) & Porto Alegre, Rio Grande do Sul (P film)

INYLBRA S.A. TAPETES E VELUDOS Diadema, São Paulo (P staple)

MANAP - MANUFATURA NACIONAL DE PLÁSTICOS
Osasco, São Paulo (P monofil)

MARCATTO S.A. IND. E COM. Jaragua do Sul, Santa Catarina (E & P monofil)

MONOFIL - CIA. INDUSTRIAL DE MONOFILAMENTOS
São Paulo, São Paulo (P monofil)

SEARA IND. TÉXTIL LTDA. Londrina, Paraná (E & P monofil)

SPUMAR S.A. INDÚSTRIA E COMÉRCIO São Paulo, *Fibrilene, Polylene, Polypian, Prolene* (P yarn, staple & film)

TAPETELENE - INDÚSTRIA S.A. Pajucara/Maramguape, Ceará (P staple)

TINTORIA S.A. - BENEFICIAMENTO DE FIO (P yarn)

OLEFIN FILM FIBER, only

BRASMEN TOL CACAPAVA S.A., Cacapava, São Paulo

BRAZIL (continued)

CACIQUE DE EMBALAGENS S.A INDÚSTRIA E COMÉRCIO, Londrina, Paraná

C.A.T.A. - CIA. AMAZONIA TÉXTIL DE ANIAGEM S.A., Belém, Pará

CIA. FAB. YOLANDA S.A., Recife, Pernambuco

CIA. JAUENSE INDUSTRIAL, Jau, São Paulo

CIA. UNIÁO MANUFATORA DE TECIDOS, Rio de Janeiro

DICOPLAST S.A. INDÚSTRIA E COMÉRCIO DE PLASTICOS, Presidente Prudente, São Paulo

EMPLA - EMBALAGENS PLÁSTICAS S.A., Rio de Janeiro

FIBRASA IND. E COM. DE FIOS E EMBALAGENS S.A., Espirito Santo

FIBROTEX TECELAGEM DE FIBRAS S.A., São Paulo

IMPLASA - INDÚSTRIA DE PLÁSTICOS ZANIOLO S.A., São José dos Pinhais, Paraná

INDÚSTRIA TÉXTIL TSUZUKI LTDA., Suzano, São Paulo

IPLAC DO BRASIL S.A. PLÁSTICOS, Fortaleza, Ceará

NOVOPLAST IND. E COM. DE PLÁSTICOS, Nova Odessa, São Paulo

PLABASA - PLÁSTICOS DA BÁHIA S.A., Salvador, Bahiá

PLASMINAS - PLÁSTICOS MINAS LTDA., Tres Pontas, Minas Gerais

PLÁSTICOS DO PARANÁ LTDA., Londrina, Paraná

PLÁSTICOS LINIL S.A., Recife, Pernambuco

PLÁSTICOS INDÚSTRIA DE EMBALAGENS LTDA., Campinas, São Paulo

QUALITAS IND. E COM. LTDA., São Paulo

SACOPLAST/PLANOSA - PLÁSTICOS DO NORDESTE S.A., Natal, Rio Grande do Norte

GLASS FIBER

OCFIBRAS Rio Claro, São Paulo *Fiberglas*

BULGARIA

KOMBINAT "DIMITAR DOMOV" •
Acrylic — Burgas *Bulana* (staple)
Nylon 6 — Vidin *Vidlon* (yarn)
Polyester — Yamboi *Yzmbolen* (yarn, staple & tow)

KOMBINAT "SVILOSA"
Rayon — Svishtov (reg yarn & staple)

OLEFIN FIBER

KOMABINAT "DIMITAR DOMOV" Yamboi (P staple)

CANADA

BADISCHE CANADA LIMITED
Nylon 6 — Arnprior, Ontario *Zefran* (yarn & staple)

CELANESE CANADA INC., FIBRES DIVISION•
Acetate — Drummondville, Quebec (yarn)

CELANESE CANADA (MILLHAVEN) INC.
Polyester — Millhaven, Ontario *Fortel* (yarn, staple, tow & fiberfill)

COURTAULDS (CANADA) LIMITED
Rayon — Cornwall, Ontario (staple)

DU PONT CANADA INC. •
Nylon 66 — Kingston, Ontario *Antron, Cantrece, Du Pont* (yarn, staple & tow)
Polyester — Kingston *Dacron* (yarn)
Spandex — Maitland *Lycra* (fused multifil)

FIRESTONE TEXTILES CO.-A DIVISION OF FIRESTONE CANADA LTD.-LTEE
Nylon 6 — Woodstock, Ontario (yarn & monofil)

OLEFIN FIBER

AMOCO FABRICS & FIBERS CO. Brantford & Hawkesbury, Ontario, St. Jean, Quebec *Protel* (P yarn, staple, E & P monofil & P film)

CALKO MILLS LTD. Rivière du Loup, Quebec (P monofil)

CANADA WESTERN CORDAGE CO., LTD. New Westminster, B.C. (P monofil)

DOON TWINES LTD. Kitchener, Ontario (P yarn, monofil & staple)

DU PONT CANADA INC. North Bay, Ontario (P film)

GUELPH TWINES LTD. Guelph, Ontario (P monofil & film)

NOVASTRAND St. John, New Brunswick (P monofil)

POLI-TWINE CORP. LTD. Belleville, Ontario & Saskatoon, Saskatchewan *Polyrie, PolyTwine, Spiralok* (P monofil)

SCHLEGEL COMPANY CANADA Oakville (P monofil)

STRUDEX FIBRES LTD., DIVISION OF KRAUS CARPET MILLS LTD. Waterloo (P yarn & staple - captive)

OLEFIN FILM FIBER, only

FIBERWORLD, LTD. Hawkesbury, Ontario

POLYMER INTERNATIONAL (N.S.) LTD. Truro, N.S.

GLASS FIBER

FIBERGLAS CANADA LIMITED Guelph, Ontario *Fiberglas*

CHILE

GOODYEAR DE CHILE, S.A.I.C.
Nylon 6 — Maipú, Santiago (yarn & monofil)

INDUSTRIAS QUIMICAS GENERALES S.A.
Rayon — Quillota, Valparaiso (ind yarn & staple)

CHILE (continued)

LANERA AUSTRAL S.A.
Polyester — Santiago (yarn, staple & tops)

MANUFACTURAS SUMAR S.A.
Nylon 6 — El Pinar 172, Santiago *Crilobal* (yarn)
Polyester — El Pinar 172 *Poligal* (yarn & staple)

QUIMICA INDUSTRIAL S.A.
Polyester — Maipú, Santiago *Polycron* (staple & tops)

CHINA, PEOPLE'S REPUBLIC OF

Although reliable information on locations of man-made fiber plants in the People's Republic of China is not available, every effort has been made to make the following listing as complete as possible.

RAYON and/or ACETATE PLANTS reported at:
Amoy, Antung, Canton, Foshan, Kirin, Nanchang, Nanking, Paoting and Shanghai.
NYLON PLANTS reported at:
Beijing; Hsinhsiang, Paoting Province; Jinzhou; Liaoyang; Pingdings; Shanghai; Shanyi; Sian; Sichuan; Sining; Tianjin and Zhenjiang.
POLYESTER PLANTS reported at:
Beijing; Changzhou, Jiangsu Province; Fangshen, Beijing Province; Guangzhou, Canton Province; Hangchow; Heilongjiang; Jinshan, Shanghai Province; Liaoyang; Nantong; Nanjing, Jiangsu Province; Shanghai; Sichuan; Taiyuan; Tianjin; Tientsin; Xinhu; Yizheng and Zhenjiang.
ACRYLIC PLANTS reported at:
Chenchiang, Harbin Province; Daqung; Lanzhou; Lucia and Shanghai.
NONCELLULOSIC PLANTS reported at:
Beijing (vinal); Canton (vinyon); Chunking (vinyon); Foochow (vinyon); Lanzhou (olefin & vinal); Shanghai (vinyon); Shengli (vinyon) and Tientsin (vinyon).

The following three plants have been reported as producing glass fiber:
Shanghai Glass Fiber Plant, Shanghai Tungfanghung Glass Fiber Plant and Tientsin Glass Fiber Plant.

COLOMBIA

CELANESE COLOMBIANA, S.A.
Acetate — Yumbo, near Cali, Valle del Cauca (yarn)
Nylon 6 — Sabaneta, Antioquia *Nylocel* (yarn)
Polyester — Yumbo *Fortrel* (yarn & staple)

COLTEFIBRAS S.A.
Polyester — Igatui, Antioquia* (yarn & staple)

ENKA DE COLOMBIA S.A.
Nylon 6 — Girardota, Antioquia *Enkalon* (yarn)
Polyester — Girardota *Terlenka* (yarn & staple)

FABRICA DE HILAZAS VANYLON S.A.
Nylon 6 — Barranquilla, Atlántico *Vanylon* (yarn & monofil)

POLIMEROS COLOMBIANOS S.A.
Polyester — Medellin, Antioquia *Primel* (yarn, staple, tow & tops)

ZYLETTE (LAFAYETTE)
Polyester — Bogotá (yarn)

OLEFIN FILM FIBER, only

COMPANIA NACIONAL DE EMPAQUES S.A. Medellin

PLASTICOS DE MAGDELENA LTDA. Santa Marta

POLYMER DE COLOMBIA S.A. Cartagena

COSTA RICA

OLYMPIC FIBERS, S.A.
Polyester — San Antonio de Belén (yarn)

CUBA

INDUSTRIAS CONSOLIDADAS DE MATANZAS, S.A.
Rayon — Matanzas (ind & reg yarn & staple)

CYPRUS

OLEFIN FIBER

LORDOS POLYSAC (LIMASSOL) LIMITED Limassol (P film)

CZECHOSLOVAKIA

CHEMICKÉ ZÁVODY JURAJA DIMITROVA, N.P.•
(GEORGE DIMITROV CHEMICAL WORKS, NATIONAL CORP.)
Rayon — Bratislava, Slovakia (reg yarn & staple)

CHEMLON, N.P. (CHEMLON, NATIONAL CORPORATION)
Nylon 6 — Humenné, Slovakia *Chemlon* (yarn)

CHEMOSVIT, N.P. (CHEMOSVIT, NATIONAL CORPORATION)•
Nylon 6 — Svit, Slovakia *Svitontex* (yarn & staple)
Rayon — Svit (reg yarn)

SEVEROCESKÉ CHEMICKÉ ZÁVODY, N.P.
(NORTH BOHEMIAN CHEMICAL WORKS, NATIONAL CORP.)
Rayon — Lovosice, Bohemia (ind yarn)

SILON, N.P. (SILON, NATIONAL CORPORATION)
Nylon 6 — Planá nad Luznici, Bohemia *Silon* (yarn & monofil)
Polyester — Planá nad Luznicí *Tesil, Tevyro, Velana* (staple, tow & fiberfill)

SLOVENSKÝ HODVÁB, N.P.
(SLOVAKIAN FILAMENT YARN, NATIONAL CORPORATION)
Polyester — Senica nad Myjavou, Slovakia *Slotera* (yarn)
Rayon — Senica nad Myjavou (reg yarn)

SPOLANA, N.P. (SPOLANA, NATIONAL CORPORATION)
Rayon — Neratovice, Bohemia (staple)

OLEFIN FIBER

CHEMICKÉ ZÁVODY JURAJA DIMITROVA, N.P. Bratislava *Istrona, Labren, Nobelex* (P yarn & staple)

CHEMOSVIT, N.P. Svit *Prolen, Texizol* (P yarn & spunbonded)

JUTA, N.P. Úpice, Bohemia (P spunbonded)

OLEFIN FILM FIBER, only

JUTA, N.P. Adamov, Moravia and Bernartice u Trutnova, Dvur Králové, Jilemnice & Úpice, Bohemia

POVAZSKÉ CHEMICKÉ ZÁVODY, N.P. Zilina, Slovakia

TECHNOLEN, N.P. Lomnice nad Popelkou, Bohemia

CZECHOSLOVAKIA (continued)

GLASS FIBER

SKLOPLAST, N.P. (SKLOPLAST, NATIONAL CORPORATION)
Trnava, Slovakia (yarn, chopped strand & mat)

VERTEX, N.P. (VERTEX, NATIONAL CORPORATION) Litomysl, Bohemia (yarn, roving, mat & staple yarn)

DENMARK

OLEFIN FIBER

A/S FIBERTEX Aalborg (P staple)

ESBJERG TOVVAERKSFABRIK A/S Esbjerg *Westflex* (E & P monofil & film, P staple)

JACOB HOLM VARDE A/S Varde *Danaklon, IHS* (E & P staple & film), *Krenit* (P reinforcing fiber)

OLEFIN FILM FIBER, only

R.F.W. PLAST-INDUSTRI A/S Vejle

ROBLON A/S Frederikshavn

EQUADOR

ECUATORIANA DE TEJIDOS DE PUNTA
Polyester — Punta (yarn)

ENKADOR S.A.
Polyester — Sangolqui, Pichincha (yarn)

FIBRATEX S.A.
Polyester — Guayaquil, Guayas (yarn)

EGYPT

ESTABLISSEMENTS INDUSTRIELS POUR LA SOIE ET LE COTON S.A.A. (E.S.C.O.)
Rayon — Cairo (reg yarn)

MISR AL-AMIRIYA INDUSTRIAL FIBRE CO.
Polyester — Aminya (yarn* & staple)

SOCIETE MISR POUR LA RAYONNE S.A.A. (MISR RAYON CO.)
Nylon 6 — Kafr-el-Dawar *Misrnylon* (yarn), *Misrnylon* (staple)
Polyester — Kafr-el-Dawar *Polymisr* (yarn)
Rayon — Kafr-el-Dawar (reg yarn & staple)

EL SALVADOR

OLEFIN FIBER

FILAMENTOS Y PERFILES, S.A. (FILPERSA) San Salvador *Duraplen* (E & P monofil)

SALVAPLASTIC, S.A. San Salvador (P monofil)

FINLAND

KEMIRA OY SÄTERI
Rayon — Valkeakoski (staple)

LAPPFIBER OY
Nylon 66 — Tornio (yarn)

OLEFIN FILM FIBER, only

MANILLA OY Turku

PIIPPO OY Lempäälä

GLASS FIBER

A. AHLSTROM OY GLASSFIBRE Karhula *Kuitulasi* (roving & mat)

FRANCE

CELLATEX (a subsidiary of Rhône-Poulenc-Textile)
Rayon — Givet, Ardennes; Grenoble, Isère (reg yarn)

COURTAULDS S.A.
Acrylic — Pont du Leu, Coquelles, Pas-de-Calais *Courtelle* (staple)
Rayon — Pont du Leu (staple)

NYSAM S.A.
Nylon 6 — St. Quentin, Aisne *Lilion* (yarn)

RHÔNE-POULENC-FIBRES (a subsidiary of Rhône-Poulenc-Textile)
Nylon 66 — Albi, Tarn; St. Laurent-Blangy, Pas-de-Calais, St. Quentin, Aisne & Valance, Drôme *Nylfrance* (yarn & staple)
Polyester — Gauchy, Aisne & Valence *Bidim* (spunbonded), *Tergal* (yarn & staple)

RHOVYL (a subsidiary of Rhône-Poulenc-Textile)
Vinyon — Tronville-en-Barrois, Meuse *Clévyl, Rhovyl, Thermovyl* (yarn & staple)

SOCIETE CHOMARAT
Nylon 6 — Mariac (yarn - captive)

OLEFIN FIBER

PLASTIQUE DE ROUBAIX Roubaix (P film & staple)

SODOCA FABRICATION DE NONTISSES SYNTHETIQUES S.A.R.L. Neuf Brisach, Haut-Rhin (P spunbonded)

OLEFIN FILM FIBER, only

ETS. AMMANN & CIE. Saint-Louis

ETS. BATAILLE Rosendael

BIHR FRERES S.A. Xertigny

BOUSSAC SAINT FRERES S.A. Flixecourt

SEINE & LYS Paris

GLASS FIBER

OWENS-CORNING FIBERGLAS FRANCE S.A. L'Ardoise, Gard *Fiberglas*

FRANCE (continued)

SAINT-GOBAIN INDUSTRIES, DIVISION VERRE TEXTILE
Chambéry, Savoie *Silionne, Stratifil, Stratimat, Verrane*

GERMAN DEMOCRATIC REPUBLIC
DEUTSCHE DEMOKRATISCHE REPUBLIK (EASTERN)

(Those facilities indicated by # are part of the trust VEB Chemiefaserkombinat Schwarza "Wilhelm Pieck".)

CHEMIEFASERWERK "FRIEDRICH ENGELS" #
Acrylic — Premnitz, Krs. Rathenow *Wolpryla* (staple)
Nylon 6 — Premnitz *Dederon* (staple)
Polyester — Premnitz *Grisuten* (staple)
Rayon — Premnitz (reg yarn)

CHEMIEFASERWERK "WILHELM-PIECK-STADT" GUBEN #
Nylon 6 — Guben *Dederon* (yarn & monofil)
Polyester — Guben *Grisuten* (yarn)

KUNSTSEIDENWERK "CLARA ZETKIN, ELSTERBERG" #
Rayon — Elsterberg, Krs. Greiz (reg yarn)

SACHSISCHES KUNSTSEIDENWERK "SIEGFRIED RADEL" #
Polyester — Pirna* (yarn)
Rayon — Pirna (ind, reg & cupra yarn)

SACHSISCHE ZELLWOLLE #
Rayon — Plauen (staple)

SPINNSTOFFWERK "OTTO BUCHWITZ" #
Rayon — Glauchau (staple)

VEB CHEMIEFASERKOMBINAT SCHWARZA "WILHELM PIECK"
Nylon 6 — Schwarza, Krs. Rudolstadt *Dederon* (yarn)
Rayon — Schwarza (staple)

VEB FILMFABRIK FOTOCHEMISCHES KOMBINAT
Acrylic — Wolfen, Krs. Bitterfeld *Wolpryla* (staple)
Rayon — Wolfen (ind yarn & staple)
Vinyon — Wolfen *Piviacid* (staple)

ZELLSTOFF-UND ZELLWOLLWERKE WITTENBERGE #
Rayon — Wittenberge (staple)

GLASS FIBER

VEB GLASSEIDENWERK *Oschatz Glasseidengewebe, Glasseiden-Roving, Glasseiden-Stapelbindermatten, Glasseiden-Twist, Glasseiden-Zwirn, Roving-Gewebe*

GERMANY, FEDERAL REPUBLIC OF
BUNDESREPUBLIK DEUTSCHLAND (WESTERN)

BAYER A.G.
Acrylic — Dormagen *Bayer-Textilfaser Dralon* (yarn & staple)
Nylon 6 — Dormagen *Perlon-Draht* (monofil)
Spandex — Dormagen *Bayer-Textilfaser Dorlastan* (fused multifil)

BOLTA WERKE G.m.b.H.
Saran — Nürnberg *Bolta* (monofil)

DEUTSCHE ICI G.m.b.H.
Nylon 66 — Östringen *Timbrelle* (yarn & staple)
Polyester — Östringen *Terylene* (yarn)

GERMANY, FEDERAL REPUBLIC OF (continued)

BUNDESREPUBLIK DEUTSCHLAND (WESTERN)

DU PONT DE NEMOURS (DEUTSCHLAND) G.m.b.H.

Nylon 66	Uentrop, Kreis Unna (yarn & staple)
Polyester	Uentrop *Dacron* (staple, tow & fiberfill)

ENKA A.G.

Nylon 6 & 66	Obernburg *Enka Nylon* (yarn), *Enka Perlon* (yarn)
Polyester	Oberbruch & Obernburg *Diolen* (yarn)
Rayon	Kelsterbach, Oberbruch & Obernburg (ind & reg yarn)

E. HAHL KG •

Nylon 6	Munderkingen (staple)

FASERWERKE LINGEN G.m.b.H.

Acrylic	Lingen (staple)

HOECHST A.G.

Acrylic	Kelheim/Donau *Dolan* (staple)
Polyester	Bad Hersfeld, Hessen & Bobingen/Augsburg-land *Trevira* (yarn, staple & spunbonded), *Trevira-Draht* (monofil)
Rayon	Kelheim/Donau (staple)

KUNERT

Nylon 66	Deggendorf (yarn)
Polyester	Deggendorf (yarn)

LUTRAVIL SPINNVLIES •

Nylon 6	Kaiserslautern *Lutrabond* (spunbonded)
Polyester	Kaiserslautern *Lutradur* (spunbonded)

NORDDEUTSCHE FASERWERKE G.m.b.H.

Nylon 6 & 66	Neumünster *SIKS NYLON* (yarn), *SIKS PERLON* (yarn & staple)
Polyester	Neumünster *Avitron* (yarn)

PHOENIX GUMMIWERK A.G.

Saran	Hamburg/Harburg *Harlan* (monofil)

HEINRICH REINHOLD KG •

Nylon 6	Selbitz, Bayern (staple)

RHODIA A.G.

Acetate	Freiburg/Br. *RHIAKABEL* (tow)
Nylon 66	Freiburg/Br. & Rottweil a. N/Württ. *RHOA-fil Nyltest, RHOA-Spinnfaser, RHOA-tex HELANCA* (yarn & staple)
Polyester	Freiburg/Br. *RHOA-fil TERGAL, RHOA-tex TERGAL* (yarn)

SPINNSTOFFABRIK ZEHLENDORF A.G.

Polyester	Berlin-Zehlendorf *Trevira* (yarn & staple)

WACKER-CHEMIE G.m.b.H.

Vinal	München-Burghausen *Wacker MP-Faser* (staple)

OLEFIN FIBER

J. F. ADOLFF A.G. Backnang (P film)

AMOCO FABRICS & FIBERS CO., DIVISION OF AMOCO (DEUTSCHLAND) G.m.b.H. Gronau (P film & staple)

J. H. BENECKE G.m.b.H. Peine *Corovin* (P spunbonded)

R. B. J. RUDOLF BILLERMANN KG Emsdetten (P yarn & staple)

CHEMISCHE WERKE HÜLS A.G. Marl, Kreis Recklinghausen, Westphalia *Vestolan* (E & P monofil)

GERMANY, FEDERAL REPUBLIC OF (continued)

BUNDESREPUBLIK DEUTSCHLAND (WESTERN)

DYNAMIT NOBEL A.G. Troisdorf, Bez. Köln *Trofil* (E & P monofil & tow)

DEUFIL Bergkamen (P yarn)

FASERWERKE BOTTROP G.m.b.H. Bottrop (P staple)

FÜSSENER TEXTIL A.G. Füssen (P film)

GEO. GLEISTEIN & SOHN Bremen-Vegesack (P film & monofil)

E. HAHL KG Munderkingen (P monofil)

RUDOLF HILLER KG (P monofil)

LUTRAVIL SPINNVLIES Kaiserslautern *Lutrasil* (P spunbonded)

HEINRICH REINHOLD KG Selbitz/Bayern (P staple)

STEEN Hamburg (P staple)

WESTFALIA SPINNEREI U. KUNSTOFFWERK SCHEM KG Minden (P monofil & film)

OLEFIN FILM FIBER, only

BAUMHÜTER G.m.b.H. Wiedenbrück

BREMER WOLL-KÄMMEREI Bremen-Blumenthal

ERNST JAEGER Düsseldorf-Reisholz

HEINZ G. JUNEMANN (NORDHESSISCHE HAARWARENFABRIK) Felsberg

KUSGA KUNSTOFFGARNE G.m.b.H. Mainz

POLYDRESS PLASTIC G.m.b.H. Michelstadt

POLYUNION KUNSTOFFWERK Mesum

SCHILGEN Emsdetten

SPOHN G.m.b.H Freiburg

B. T. F. TECKLENBORG & CO. Bremen-Grohn

DR. KARL WETEKAM & CO. Melsungen

GLASS FIBER

GEVETEX-TEXTILGLAS G.m.b.H. Aachen & Dortmund-Mengede *Gevetex*

SCHULLER GLASWERK Westheim

GREECE

ETMA S.A.

Nylon 6/66	Athens (yarn)
Rayon	Athens (reg yarn)

HELLENIC SYNTHETICS INDUSTRY

Polyester	Kalogreza (yarn)

GREECE (continued)

POLYETMA LTD.
Polyester — Athens (yarn)

VOMVICRYL S.A. (affiliate of "Vomvix" S.A.)
Acrylic — Stylis, near Lamia (yarn, staple, tow & tops)

"VOMVIX" S.A.
Nylon 6/66 — Athens (yarn)
Polyester — Athens (yarn)

OLEFIN FIBER

VIOFARM Argos (P staple)

OLEFIN FILM FIBER, only

ARIPLAST S.A. Athens

BIOSISAL Athens

DESSILA Piraeus

ELVISAK Athens

MARINE ROPE Athens

OLYMPIC ROPES Piraeus

SISAL ROPERY Salonika

C. VELLIS HEIRS S.A. Piraeus

VESY S.A. SYNTHETIC MATERIALS INDUSTRY Piraeus

GUATEMALA

HILOS SINTETICOS CENTROAMERICANOS, S.A.
Nylon 6 — San José Pinula, Guatemala (yarn) (idle)

OLEFIN FIBER

CORDELERIA LA RAPIDA Guatemala, Guatemala (P monofil)

HONDURAS

OLEFIN FIBER

POLYMER (subsidiary of United Brands) San Pedro Sula (P film)

HUNGARY

MAGYAR VISCOSAGYÁR (Hungarian Viscose Factory)
Acrylic — Nyergesújfalu *Crumeron* (staple)
Nylon 6 — Nyergesújfalu *Danamid* (yarn & staple)
Rayon — Nyergesújfalu (staple)

OLEFIN FIBER

KENDER JUTA TEXTILIPARI V. Budapest (P film)

KENDERFONÓ ÉS SZÖVÖIPARI V. SZEGED Szeged (P film)

MAGYAR VISCOSAGYÁR Nyergesújfalu *Popril* (P staple)

HUNGARY (continued)

SOPRONI SZÖNYEGGYÁR Sopron *Sopilen* (P yarn)

TISZA CHEMICAL COMBINE Lenin Varas (P staple)

INDIA

THE AHMEDABAD MFG. & CALICO PRINTING CO. LTD.
CALICO POLYESTER FIBRE DIV.
Polyester — Baroda, Gujarat *Ilacron* (staple)

ANDHRA PRADESH RAYONS LTD.
Rayon — Kamalapuram, Warangal District, Andhra Pradresh* (staple)

THE BARODA RAYON CORPORATION LIMITED
Nylon 6 — Udhna, Gujarat *Snialon* (yarn)
Polyester — Udhna *Sniater* (yarn)
Rayon — Udhna (reg yarn)

BONGAIGAON REFINERY AND PETROCHEMICALS LTD.
Polyester — Goalpara, Assam* (staple)

CENTURY ENKA LIMITED
Nylon 6 — Bhosari, Pune, Maharashtra* *Enkalon* (yarn)
Polyester — Bhosari (yarn)

CENTURY RAYON (Prop.: The Century Spg. & Mfg. Co. Ltd.)
Rayon — Kalyan, near Bombay, Maharashtra (ind & reg yarn)

CHEMICALS & FIBRES OF INDIA LIMITED
Polyester — Thane, near Bombay, Maharashtra *Terene* (staple)

DOSHI SYNTHETICS
Polyester — Kandla, Gujarat* (yarn)

GARWARE NYLONS LIMITED
Nylon 6 — Pimpri, Pune, Maharashtra* *Garware* (yarn & monofil)
Polyester — Pimpri (yarn)

THE GWALIOR RAYON SILK MFG. (WVG) CO. LIMITED
Rayon — Birlagram, Nagda, Madhya Pradesh & Birlakootoam, Mavoor, Kerala (staple)
Polyester — Rajgarh, Madhya, Pradesh (staple*)

INDIA POLYFIBRES
Polyester — Parakandauli, UP* (staple)

INDIAN ORGANIC CHEMICALS LIMITED
Polyester — Manali, Madras, Tamil Nadu *Futura* (staple)

INDIAN PETROCHEMICALS CORP. LTD.
Acrylic — Vadodara, Baroda, Gujarat *Cashmilon* (staple)

THE INDIAN RAYON CORPORATION LIMITED
Rayon — Veraval, Gujarat (reg yarn)

THE INDUSTRIAL PROMOTION & INVESTMENT CORPORATION OF ORISSA LTD.
Polyester — Orissa* (staple)

J.K. RAYON, J.K. PURI
Rayon — Kanpur, Uttar Pradesh (reg yarn)

J.K. SYNTHETICS LIMITED
Acrylic — Kota, Rajasthan *Jayacrylic* (staple)
Nylon 6 — Kota *Jayanka, Jaycord, Jaykalon* (yarn, monofil & staple)
Polyester — Calcutta, Kota, Orissa* *Jakaylene* (yarn & staple)

INDIA (continued)

JAGITJIT COTTON TEXTILE MILLS LTD.
Nylon 6 — Hoshiarpur, Punjab (yarn)

KANHAYA POLYSYNTHETICS
Polyester — Gujarat, Kandla (staple)

KARNATAKA STATE INDUSTRIAL INVESTMENT AND DEVELOPMENT CORPORATION LIMITED
Polyester — Karnataka* (staple)

KESORAM RAYON (Prop.: Kesoram Industries and Cotton Mills Ltd.)
Rayon — Nayasarai, Hooghly, West Bengal (reg yarn)

M.P. STATE INDUSTRIAL DEVELOPMENT CORPORATION LTD.
Polyester — Madhya Pradesh* (staple)

MADURA COTAS LTD.
Nylon 6 — Maedak, Andhra Pradesh* (yarn)

MODIPON LIMITED
Nylon 6 — Modinagar, Uttar Pradesh *Modipon* (yarn)
Polyester — Modinagar (yarn)
Rayon — (staple*)

THE NATIONAL RAYON CORPORATION LIMITED
Nylon 6 — Mohone-Kalyan, near Bombay, Maharashtra* *N.R.C* (yarn)
Rayon — Mohone-Kalyan (ind & reg yarn)

NIRLON SYNTHETIC FIBRES & CHEMICALS LIMITED
Nylon 6 — Bombay, Maharashtra *Nircord, Nirlon* (yarn & monofil)
Polyester — Bombay *Nirester* (yarn)

ORKAY SILK MILLS PVT. LTD.
Polyester — Patalganga, Maharashtra* (yarn)

P.O. PETROCHEMICALS
Acrylic — Vadodara, Gujarat* (staple)
Polyester — Baroda, Gujarat* (staple)

PASUPATI ACRYLON LIMITED
Acrylic — Moradabad, Uttar Pradesh* (staple)

PETROFILS COOPERATIVE LIMITED
Polyester — Jawahamagar, Baroda, Gujarat (yarn)

PRADESHIYA INDUSTRIAL INVESTMENT CORPORATION OF UTTAR PRADESH
Polyester — Uttar Pradesh* (yarn & staple)

PUNJAB STATE INDUSTRIAL DEVELOPMENT CORP. LTD.
Polyester — Punjab (staple)

RELIANCE TEXTILE INDUSTRIES LTD.
Polyester — Patalganga, Maharashtra* (yarn & staple*)

SHREE SYNTHETICS LIMITED
Nylon 6 — Naulakhi, Ujain, Madhya Pradesh *Shreelon* (yarn)
Polyester — Naulakhi *Shreester* (yarn)

SHRIRAM FIBRES LIMITED
Nylon 6 — Manali, Madras, Tamil Nadu *Tufcord* (yarn)

SHRIRAM RAYONS
Rayon — Kota, Rajasthan (ind yarn)

THE SIRSILK LIMITED
Acetate — Sirpur-Kaghaznagar, Andhra Pradesh (yarn & staple)

INDIA (continued)

SOUTH INDIA VISCOSE LIMITED
Rayon — Sirumughai, near Mettupalayam, Tamil Nadu (reg yarn & staple)

STRETCH FIBRES (INDIA) LIMITED
Nylon 6 — Nagpur, Maharashtra *SF* (yarn)

SWADESHI POLYTEX LIMITED
Polyester — Gaziabad, Uttar Pradesh *Jaiene* (staple)

TAMIL NADU INDUSTRIAL DEVELOPMENT CORP.
Polyester — Madras, Tamil Nadu* (staple)
Rayon — Madras* (staple)

THE TRAVANCORE RAYONS LIMITED
Rayon — Rayonpuram, Kerala (reg yarn)

TUNGABHADRA FIBRES LTD.
Rayon — Tungabhadra, Andhra Pradesh (staple)

OLEFIN FIBER

ACME INVESTMENTS LTD. Panki Industrial Area, Kanpur* (P yarn)

ANIL KUMAR JAIN Ankleshwar, Gujarat* (P yarn)

GUPTA NEEDLE INDUSTRIES PVT. LTD. Dharuhera, Haryana* (P yarn)

INDO SYNTHETICS CORP. (P yarn*)

J.K. BHAGAT Bhiwand, Alwar, Rajasthan* (P yarn)

KALYANI ASBESTOS CEMENT PVT. LTD. Kalol, Gujarat* (P yarn)

NEOMER LIMITED Baroda, Panchmahal, Gujarat *Proplon* (P staple)

NIAGARA INTERNATIONAL (P yarn*)

POLYPROP INDUSTRIES Dharuhera, Haryana* (P yarn)

RAJENDRA V. PATEL Cambay, Gujarat* (P yarn)

SANJEEV SHRIYA Uttar Pradesh* (P yarn)

GLASS FIBER

FIBREGLASS PILKINGTON LIMITED Thane, near Bombay, Maharashtra

U.P. TWIGA FIBREGLASS Sikandarabad, Uttar Pradesh

INDONESIA

INDONESIA PENELITIAN SELULOSA (Cellulose Research Institute)

P.F. FIBRES e CHEMICALS
Nylon — (yarn)

P.T. BERKAT INDAH AGUNG
Rayon — Tangerang, West Java* (staple)

P.T. INDO-BHARAT RAYON
Rayon — Desa Cilangkap, Purwakarta (staple)

P.T. INDONESIA ASAHI CHEMICAL
Nylon 6 — Jatiluhur, Purwakarta, West Java (yarn)

INDONESIA (continued)

P.T. INDONESIA TORAY SYNTHETICS
Nylon 6 — Tangerang, West Java (yarn)
Polyester — Tangerang (staple)

P.T. INDUSTRI SANDANG I
Polyester — Tangerang* (staple)

P.T. INDUSTRI SANDANG II
Rayon — South Sumatra* & West Kalimantan* (staple)

P.T. INTI
Rayon — West Kalimanton (staple*)

P.T. KUMA FIBER (P.T. Kuraray Manunggal Fibre Industries)
Polyester — Cikokol, Tangerang, West Java (staple)

P.T. POLYSINDO EKA PERKASA
Polyester — Kaliwungu, Kendal, C. Java (staple)

P.T. SHINTA-INDAH DJAYA
Nylon 6 — Tangerang, West Java (yarn)
Polyester — Tangerang *Shinta* (yarn)

P.T. SOUTH PACIFIC VISCOSE
Rayon — Purwakarta, West Java (staple)

P.T. SUSILIA INDAH SYNTHETIC FIBRES INDUSTRIES
Polyester — Djakarta*, Tangerang, West Java (yarn & staple)

P.T. TEXMACO TAMAN SYNTHETIC
Polyester — Kaliwungu Kendal, West Java (yarn)

P.T. TIFICO (P.T. Teijin Indonesia Fibre Corp.)
Polyester — Tangerang, West Java (yarn & staple)

P.T. TOLARAM
Polyester — (yarn)

P.T. TRI REMPOA SOLO SYNTHETIC
Polyester — Rempon, Tangerang, West Java* (staple)

P.T. VASTEX BIMA INDUSTRIES
Polyester — Jalan Gedebage Ujungberung Bandung (yarn)

P.T. YASINTA
Polyester — Tangerang, West Java (yarn)

RAUMAQ ENTERPRISES
Nylon — (yarn)

IRAN

PARSYLON CORPORATION
Nylon 6 — Khoram-Abad (yarn)

POLYACRYL IRAN CORPORATION
Acrylic — Isfahan (staple)
Polyester — Isfahan (yarn & staple)

SHERKAT SAHAMI ALIAF
Nylon 6 — Tehran *Aliaf* (yarn)

OLEFIN FIBER

JAHANCITT SPINNING & WEAVING CO. Tehran (P film)

IRAQ

HINDIYA RAYON FACTORY
Rayon — Hindiya (reg yarn & staple)

IRELAND, REPUBLIC OF (EIRE)

ASAHI SYNTHETIC FIBRES (IRELAND) LTD.
Acrylic — Ballina, Mayon *Cashmilon* (staple)

LIRELLE (IRELAND) LTD. (A Division of Unifi, Inc.)
Polyester — Letterkenny *Lirelle* (yarn)

WELLMAN INTERNATIONAL LTD.
Nylon 6 & 66 — Mullagh, Kells, Meath *Wellon* (staple)
Polyester — Mullagh *Filwell, Wellene* (staple)

OLEFIN FIBER

F. DRAKE (IRELAND) LTD. Moate, Westmeath (P staple)

J. & L.F. GOODBODY (SYNTHETICS) LTD. Clara, Offaly (P yarn & film)

OLEFIN FILM FIBER, only

IRISH POLYSACKS LTD. Blarney, Cork

IRISH ROPES LTD. Newbridge, Kildare

POLYTEX LTD.

ISRAEL

ISRAEL CHEMICAL FIBRES LIMITED
Acrylic — Ashdod (staple & tow)

NILIT
Nylon 66 — Migdal Ha-Emek (yarn)

ITALY

ALBATESSILE S.p.A.
Polyester — Alba, Piemonte (yarn)

AQUAFIL S.p.A.
Nylon 6 — Arco di Trento, Trentino *Aqualon* (yarn)
Polyester — Arco di Trento (yarn)

BEMBERG S.p.A.
Nylon 6 — Gozzano, Piemonte *Ortalion* (yarn)
Rayon — Gozzano *Cupro* (yarn)

CARPOL S.p.A.
Nylon 6 — Forlì, Emilia Romagna (yarn)

ENICHEM FIBRE S.p.A. (formerly Anicfibre)
Acrylic — Ottana & Porto Torres, Sardegna *Euroacril, Sironil* (staple & tow)
Nylon 6 — Pisticci, Lucania *Nivion* (yarn & staple)
Polyester — Ottana & Pisticci *Fidion* (staple & tow)
Polyesteramide — Pisticci (pilot plant), Seriate (yarn & staple) (spunbonded non-woven fabric)

FILATURA DI VAL LESINA S.p.A.
Polyester — Andalo Valtellino, Lombardia *Valena* (yarn)

ITALY (continued)

FIMALON S.p.A.
Nylon 66 — Castelnuovo Valsugana, Trentino Alto Adige (yarn)

FORTEX SIDAC S.p.A.
Nylon 6 — Forlì, Emilia Romagna *Forlion* (yarn)

FRATELLI FRANCHI S.p.A.
Nylon 6 — Canapale, Toscana *Frankilon* (yarn)
Polyester — Canapale *Frankilene* (yarn)

MONTEFIBRE GROUP:

INDUSTRIE TESSILI VERCELLI S.p.A.
Acetate — Vercelli, Piemonte (yarn)

SOCIETÀ ITALIANA POLIESTERE S.p.A.
Polyester — Acerra, Campania *Terital* (yarn, staple & tow)

SOCIETÀ ITALIANA PRODOTTI ACRILICI S.p.A.
Acrylic — Porto Marghera, Veneto *Leacril* (staple & tow)

NOVACETA S.p.A.
Acetate — Magenta, Lombardia (yarn)

NUOVA RAYON ITALIA S.p.A.
Rayon — Rieti, Lazio (reg yarn)

RADICI FIL S.p.A.
Nylon 6 — Casnigo, Lombardia (yarn)

SETTE STELLE S.p.A.
Nylon 6 — Castelgoffredo, Lombardia (yarn)

SNIA FIBRE S.p.A.
Acrylic — Cesano Maderno, Lombardia, Villacidro, Sardegna *Velicren, Velicren F.R.* (staple & tow)
Nylon 6 & 66 — Castellaccio, Lazio; Cesano Maderno & Varedo, Lombardia; Villacidro; Napoli, Campania *Coro Lilion Souple, Lilion Styl* (yarn, staple & tow)
Polyester — Napoli *Wistel, Wistel F.R.* (yarn)

SOCIETÀ INDUSTRIALE CREMONESE S.p.A.
Rayon — Pizzighettone, Lombardia (ind yarn)

STERE
Polyester — Cardano al Campo, Lombardia (yarn)

TEXTILE PRODUKTE S.p.A.
Nylon 6 — Villa D'Ogna, Lombardia (yarn & staple)

TORCITURA DI BORGOMANERO S.p.A.
Nylon 6 — Milano, Lombardia *Borgolon* (yarn)

OLEFIN FIBER

EUROFIL Gandino, Lombardia (P staple)

FILATURA I DELEBIO S.p.A. Delebio, Lombardia *Delebion* (P yarn)

FILLI FRANA Casnigo, Lombardia (P staple & film)

I.T.S. Legnano, Lombardia (P yarn)

HIMONT ITALIA S.p.A. (formerly Merak S.p.A. and Neofil S.p.A.)
Terni, Umbria *Meraklon* (P yarn & staple)

NOVASAR Caronno Pertusella, Lombardia (P yarn & staple)

POLYMECON Zibido S. Giacomo, Lombardia (P staple & film)

ITALY (continued)

SERGEL Casnigo, Lombardia (P staple & film)

TEXTILE PRODUKTE Villa D'Ogna, Lombardia (P staple)

OLEFIN FILM FIBER, only

CARPET BACKING S.p.A. Ceriga

I.T.P.

LICANA NORD S.p.A. Cassano d'Adda (Milano)

DE MAGISTRIS EMILIO Bagnolo Cremasco

MILANPLAST s.r.l. Milano

MOPLEFAN S.p.A. Milano

NEOFIBRE s.r.l. Lendinara

SACHIM (MUMMOLO) Bari

S.E.A.L. S.p.A. Milano

S.I.S.A.L. S.p.A. Piacenza

STIROSIR S.p.A. Milano

TESSITURA LOMBARDA DI CONSONNI ELIA ALBIATE

TEXTILE GLASS FIBER

MONTEDISON Vado Ligure, Liguria

VETROTEX ITALIA S.p.A. Besana Brianza, Lombardia (yarn)

VITROFIL S.p.A.

JAPAN

ASAHI CHEMICAL INDUSTRY CO., LTD.
Acrylic — Fuji *Cashmilon, Pewlon* (yarn & staple)
Nylon 6/66 — Nobeoka & Moriyama *Asahi Kasei Nylon, Leona* (yarn, monofil & spunbonded)
Polyester — Nobeoka & Moriyama *Asahi Kasei Ester* (yarn & spunbonded)
Rayon — Nobeoka (reg & cupra yarn, cupra staple & cupra spunbonded)
Saran — Suzuka (yarn, monofil & staple)
Spandex — Moriyama *Roica*

DAIWABO CO., LTD.
Rayon — Masuda (staple)

DU PONT-TORAY COMPANY LTD.
Spandex — Shiga *Opelon* (fused multifil)

FUJI SPINNING CO., LTD.
Rayon — Toyo (staple)
Spandex — Kozakai *Fujibo Spandex*

JAPAN EXLAN CO., LTD.
Acrylic — Saidaiji *Exlan* (staple)

JAPAN (continued)

KANEBO RAYON, LTD.

Rayon	Hofu (staple)

KANEBO SYNTHETIC FIBERS, LTD.

Acrylic	Hofu *Kanebo Acryl* (staple)
Nylon 6	Hofu *Kanebo Nylon* (yarn)
Polyester	Hofu & Sabae *Kanebo Polyester* (yarn)
Spandex	Hofu *Kanebo Loobell*

KANEGAFUCHI CHEMICAL INDUSTRY CO., LTD.

Modacrylic	Takasago *Kanecaron, Kanekalon* (staple & tow)

KOHJIN CO., LTD.

Polychlal	Yatsushiro *Cordelan* (staple)
Rayon	Yatsushiro (staple)

KURARAY CO., LTD.

Polyester	Saijo & Tamashima *Kuraray Polyester* (yarn & staple)
Rayon	Kurashiki, Saijo & Tamashima *Three Golden Horses* (reg yarn)
Vinal	Okayama *Kuralon* (yarn & staple)

KUREHA CHEMICAL INDUSTRY CO., LTD.

Saran	Kaibara & Mibu *Krehalon* (yarn, monofil & staple)
Vinyon	Mibu *Vicion* (monofil)

MITSUBISHI ACETATE CO., LTD.

Acetate	Toyama (yarn & tow)
Triacetate	Toyama (yarn)

MITSUBISHI RAYON CO., LTD. •

Acrylic	Otake *Finel, Silpalon, Vonnel* (yarn & staple)
Polyester	Toyohashi *Soluna* (yarn), Lunaace (staple)

NIPPON ESTER CO., LTD. (subsidiary of Unitika, Kanebo and Mitsubishi Chemical Industry)

Polyester	Okazaki & Sabae *Kanebo Ester, Unitika Ester* (yarn & staple)

NISSHINBO INDUSTRIES, INC.

Rayon	Tokushima (staple)
Spandex	Tokushima *Mobilon*

NITIVY CO., LTD.

Vinal	Fujieda *Niti-Vilon, Solvron, Vilon* (yarn)

NITTO BOSEKI CO., LTD. • (See Ube-Nitto Kasei)

Rayon	Fukuyama (staple)

OMIKENSHI CO., LTD.

Rayon	Kakogawa (staple)

TEIJIN LTD.

Aramid	Iwakuni *Teijinconex* (staple)
Nylon 6	Mihara *Teijin Nylon* (yarn)
Polyester	Ehime, Iwakuni, Matsuyama & Tokuyama *Teijin-Tetoron* (yarn & staple)
Vinyon	Iwakuni *Tewiron* (yarn)

TEIJIN ACETATE LTD. (subsidiary of Teijin Ltd.)

Acetate	Matsuyama (yarn)

TOHO RAYON CO., LTD.

Acrylic	Mishima *Beslon* (staple & tow)
Rayon	Tokushima *Towa* (staple)

TORAY INDUSTRIES, INC.

Acrylic	Ehime *Toraylon* (staple)
Nylon 6	Aichi, Ishikawa*, Nagoya, Okazaki & Shiga *Amilan, Toray Nylon* (yarn & staple)
Nylon 6/66 copolymer	Aichi *Tapilon* (yarn)
Nylon 66	Aichi, Ishikawa, Okazaki *Promilan* (yarn)
Polyester	Ehime, Ishikawa, Mishima & Okazaki *Toray Tetoron* (yarn & staple)

JAPAN (continued)

TORAY-MONOFILAMENT CO., LTD.

Nylon 6	Okazaki *Toray Nylon* (monofil)

TOYO CHEMICAL CO., LTD.

Vinyon	Ofuna *Envilon* (yarn & monofil)

TOYOBO CO., LTD. •

Nylon 6	Tsuruga *Toyobo Nylon* (yarn)
Polyester	Iwakuni & Tsuruga *Toyobo Ester* (yarn & staple)
Promix	Tsuruga *Chinon* (yarn)
Rayon	Iwakuni *Tufcel* (staple)
Spandex	Tsuruga *Espa*

TOYOBO PETCORD CO., LTD.

Polyester	Tsuruga *Toyobo Petcord* (yarn)

UNITIKA LTD.

Nylon 6	Uji *Unitika* (yarn, monofil & staple)
Polyester	Okazaki *Marix* (ind yarn & spunbonded)

UNITIKA KASEI CO., LTD.

Vinal	Sakoshi (Akoh City) *Mewlon* (yarn, monofil & staple)

UNITIKA RAYON CO., LTD.

Rayon	Okazaki & Uji (ind & reg yarn)

YOSHIDA KOGYO K.K.

Polyester	Kurobe (yarn)

OLEFIN FIBER

ASAHI CHEMICAL INDUSTRY CO., LTD. Moriyama (P spunbonded)

CHISSO POLYPRO FIBER CO., LTD. Moriyama *Chisso Polypro, ES Fiber* (P yarn & staple)

DAIWABO CO., LTD. Harima *Daiwabo Polypro, NBF Fiber* (E & P staple)

HAGIHARA INDUSTRY CO., LTD. Kurashiki (E monofil & film)

HIRATA SPINNING CO., LTD. Yokkaichi *Hiralon* (E & P yarn & monofil)

INABA SEIKO, LTD. Gamagori (E monofil)

KANEYA SEIKO, LTD. Hokkaido & Kushiro (P monofil)

KUREHA CHEMICAL INDUSTRY CO., LTD. Mibu *Kureha Polypropylene* (P monofil)

MARUAI CO., LTD. Toyohashi (E monofil)

MITSUBISHI RAYON CO., LTD. Toyohashi *Mitsubishi Pylen* (P yarn & monofil)

MITSUI TOATSU CHEMICALS, INC. Iwakuni (Pilot Plant) & Nagoya *Hi-Zex* (E monofil)

NAGANO KAKO CO., LTD. Nagano (E monofil)

SHOWA POLYMER CO., LTD. Ibaraki (E monofil & film)

TAI-RAY CO., LTD. Mito *Danzex, Danzex Lite, Liplon* (E monofil, P yarn & monofil)

TANIYAMA CHEMICAL INDUSTRY CO., LTD. Okayama *Tanikalon* (E monofil)

TOA WOOL SPINNING & WEAVING CO., LTD. Tomari *Toabo Polypro* (P staple)

JAPAN (continued)

TONEN SEKIYUKAGAKU K.K. (TONEN PETROCHEMICAL CO., LTD.) Kawasaki *Tapyrus* (P spunbonded)

TOYOBO CO., LTD. Iwakuni (P staple)

UBE-NITTO KASEI CO., LTD. Fukuyama & Gifu *Sun Line, Ube-Nitto Polypro* (E monofil & P yarn, monofil & staple)

OLEFIN FIBER, only

DAIDO KASEI Osaka

FUJIMOTO SANGYO Osaka

OKAMOTO CHEMICAL Ehime

SAKAI KASEI Osaka

SANSO PLASTICS INDUSTRY CO., LTD. Yokkaichi

SANTO CHEMICAL Aichi

SEKISUI CHEMICAL Amagasaki & Nara

TOYAMA Chiba

TOYO SODA Yokkaichi

WAKO SPINNING CO. Gifu

YAMAJIN TEXTILE Fukui

GLASS FIBER

ASAHI FIBER GLASS CO., LTD. Ibaraki & Shonan *Glasslon*

ASAHI-SCHWEBEL CO., LTD. Moriyama

CENTRAL GLASSFIBER CO., LTD. Matsusaka

FUJI FIBER GLASS CO. Moka

KANEBO, LTD. Gunma *Textoglass*

NIPPON GLASS FIBER CO., LTD. Ibaraki & Tsu *Micro Glass*

THE NIPPON MINERAL FIBER MFG. CO. Tarui & Yuki *Superfine*

NITTO BOSEKI CO., LTD. Fukushima *Iceberg*

PARAMOUNT GLASS MFG. CO., LTD. Koriyama & Suzuka *Fether Glass*

UNITIKA U.M. GLASS CO., LTD. Kyoto *Unitka U.M.*

KENYA

AFRICA SYNTHETIC FIBER LTD.
Nylon 6 — Thika (yarn)
Polyester — Thika (staple)

JAYDEES KNITTING LTD.
Polyester — Nairobi (yarn)

KENYA FIBRE CORPORATION LTD.
Polyester — Nanyuki (yarn & staple)

KENYA (continued)

SUN FLAG LTD.
Polyester — (yarn)

OLEFIN FIBER

UNISACK LTD. Thika (P film)

KOREA PEOPLE'S DEMOCRATIC REPUBLIC OF (NORTH)

A number of man-made fiber plants are said to be operating in North Korea (see June 1970 *Organon* issue, page 113); however, no data for this country are recorded in any table of this issue due to lack of reliable information.

KOREA REPUBLIC OF (SOUTH)

CHEIL SYNTHETIC TEXTILES COMPANY
Polyester — Kumi *Eslon* (yarn & staple)

DAEHAN SYNTHETIC FIBER COMPANY
Polyester — Ulsan *Acelan* (yarn & staple)

GORYEO NYLON CORPORATION LTD.
Nylon 6 — Kyungsan Kun *Kolon* (yarn)

HANIL SYNTHETIC FIBER INDUSTRIAL COMPANY
Acrylic — Masan *Hanilon* (staple)

JEIL SYNTHETIC FIBERS COMPANY•
Polyester — Seoul *Oplen* (yarn)

KOHAP, LTD. •
Nylon 6 — Shihung *Palmylon* (yarn & staple)
Polyester — Shihung *Palmylon* (yarn & staple)

KOLON INDUSTRIES INC.
Nylon 6 — Kumi, Taegu *Kolon* (yarn)
Polyester — Kumi *Kolon* (yarn)

SAMYANG COMPANY, LTD.
Polyester — Chunju *Triron* (yarn & staple)

SUNKYONG FIBRES LTD.
Acetate — Suwon *Sunkyung* (yarn & tow)
Polyester — Suwon & Ulsan *Sunkyong* (yarn & staple)

TAEKWANG INDUSTRIAL COMPANY
Acrylic — Ulsan *Acelan* (staple)
Spandex — Ulsan *Acelan* (yarn)

TONGKOOK FIBRES LTD.
Polyester — Kumi* (yarn)

TONGYANG NYLON COMPANY
Nylon 6 — Anyang & Ulsan *Toplon* (yarn)
Polyester — Ulsan *Toplon* (yarn)

TONGYANG POLYESTER COMPANY
Polyester — Ulsan *Toplon* (yarn)

WONJIN RAYON COMPANY, LTD.
Rayon — Donong *Coray* (reg yarn & staple)

KOREA REPUBLIC OF (SOUTH) (continued)

OLEFIN FIBER

JEIL SYNTHETIC FIBERS COMPANY Seoul *Oplene* (P yarn & staple)

KOHAP, LTD. Shihung *Happylon, Pylon* (P staple)

KUMSUNG SYNTHETIC FIBER CO., LTD. Seoul *Hopelon, Polon* (P staple) (idle)

LIBYA

LIBYA NATIONAL OIL CORPORATION (LINOCO)

Nylon 6	Marsa Al-Brega* (yarn)
Polyester	Marsa Al-Brega* (staple)

LUXEMBOURG

TECHNOFIBRES

Polyester	Mertert (yarn)

Production and capacity data are combined with Belgium and the Netherlands under "Benelux" on page 104-105.

OLEFIN FIBER

DU PONT FIBRES S.A. Contern-Hesperange *Typar* (P spunbonded)

MALAYSIA

ACRYLIC TEXTILE OF MALAYSIA SDN. BHD.

Acrylic	Kedah (yarn)

KANEBO MALAYSIAN SPINNING MILLS SDN. BHD.

Acrylic	Prai (yarn)

PENFIBRE SDN. BHD.

Polyester	Penang (staple)

MALTA

NYLON KNITTING CO. LTD.

Nylon 6	Qormi (yarn)

Production and capacity data are combined with Italy.

MEXICO

CELANESE MEXICANA, S.A.

Acetate	Ocotlán, Jalisco (yarn & staple)
Acrylic	Zacapu, Michoacán (staple, tow & tops)
Nylon 6	Ocotlán & Toluca, México *Duracel, Nycel* (yarn & staple)
Polyester	Ocotlán; Querétaro, Querétaro & Toluca *Crolan* (yarn & staple)

CELULOSA Y DERIVADOS, S.A.

Acrylic	Atequiza, Jalisco *Crysel* (staple, tow & tops)
Rayon	Monterrey, Nuevo León (ind & reg yarn)

FIBRAS QUIMICAS, S.A.

Nylon 6	Monterrey, Nuevo León *Supernylon Cydsa* (yarn & monofil)
Polyester	Monterrey *Terlenka* (yarn)

MEXICO (continued)

FIBRAS SINTETICAS, S.A.

Acrylic	Cotaxtla, Veracruz *Fisisa* (staple, tow & tops)
Nylon 6	Cotaxtla *Fisisa* (yarn & monofil)
Polyester	Cotaxtla & México *Fisisa* (yarn & staple)

FIBRASOMNI, S.A.*

Nylon 6	Ixtapalapa, D.F. *Omni-Nylon* (monofil)
Saran	Ixtapalapa *Omni-Saran* (monofil)

FINACRIL, S.A.

Acrylic	Altamira (staple, tow & tops)

INDUSTRIAS PETROQUIMICAS MEXICANAS, S.A.

Polyester	El Salto, Jalisco *Inpetmex* (yarn)

KIMEX S.A.

Nylon 6	Tlalnepantla, México *Aztecron* (yarn)
Polyester	Tlalnepantla *Kintrel* (yarn)

NYLON DE MEXICO, S.A.

Nylon 6	La Leona, Nuevo León *Nylfil* (yarn & staple)
Polyester	La Leona *Delcron* (yarn, staple, tow & fiberfill)
Spandex	La Leona *Likra* (fused multifil)

OLEFIN FIBER

FIBRASOMNI, S.A. Ixtapalapa, D.F. *Politen-Omni* (E monofil), *Polyprop-Omni* (P yarn & monofil)

INDUSTRIAS POLIFIL, S.A. Ixtacuixtla, Tlaxcala *Pliana* (P yarn & staple)

PLASTICOS INDUSTRIALIZADOS, S.A. Monterrey, Nuevo León (P staple)

OLEFIN FILM FIBER, only

HILOS Y CORDELES, S.A. Tlalnepantla, México

PLASTICEL, S.A. Monterrey, Nuevo León (*Plasticel*)

POLISAC, S.A. (affiliate of Nylon de México, S.A.), Guadalajara, Jalisco (*Polisac*)

GLASS FIBER

VITRO-FIBRAS, S.A. Zacatenco, D.F. *Vitro-Fibras*

NETHERLANDS

DU PONT DE NEMOURS (NEDERLAND) N.V.

Spandex	Dordrecht *Lycra* (fused multifil)

ENKA B.V.

Aramid	Arnhem, Emmen *Arenka* (yarn)
Polyester	Emmen *Diolen, Terlenka* (yarn & staple)
Rayon	Arnhem (ind yarn) & Ede (reg yarn)

OLEFIN FIBER

LANKHORST TOUWFABRIEKEN B.V. Sneek *Tiptolene* (E monofil & P film)

T.T.C. POLYOLEFINS B.V. Nijverdal (P monofil, film & staple)

N.V. VERTO Rotterdam (P film)

NETHERLANDS (continued)

GLASS FIBER

SILENKA B.V. Hoogezand (Groningen) *Silenka*

Cellulosic production and capacity data are combined with Belgium on page 108-109. Noncellulosic production and producing capacity data are combined with Belgium and Luxembourg under "Benelux" on page 104-105.

NICARAGUA

OLEFIN FIBER

MANUFACTURERA CENTRO AMERICANA S.A. (MACEN)
Managua (P film)

NIGERIA

NICHEMTEX INDUSTRIES LTD.
Polyester — Ikorodu, Lagos *Nigerlene* (yarn & staple)

NORWAY

OLEFIN FIBER

A/S PLATON, AVD. TEKSTIL Notodden *Filmtex* (E & P film)

NORFIL-NORPACK A/S Stavern, near Larvik *Akvaflex* (P yarn, E & P monofil & film)

STAL OG TAU Tonsberg *Norseflex* (P film)

GLASS FIBER

NORSK GLASSFIBER A/S Birkeland

PAKISTAN

BENGAL FIBER INDUSTRIES, c/o BENGAL OIL MILLS LIMITED
Nylon 6 — Karachi *Nylpak* (yarn)
Polyester — Karachi (yarn & staple)

DILON LIMITED
Nylon 6 — Landhi *Dilon* (yarn)
Polyester — (yarn*)

GATRON INDUSTRIES LIMITED
Polyester — Hub Chowki (yarn)

HASHWANI GROUP
Polyester — Sind Province (yarn)

ICI PAKISTAN MANUFACTURERS LTD.
Polyester — Lahore *Tere-Pak* (staple)

NATIONAL FIBERS LIMITED
Polyester — Korangi, Karachi (yarn & staple)

NILOM NYLON MILLS LIMITED
Nylon 6 — Lyallpur *Nilom* (yarn & monofil)

PAK FIBRE INDUSTRIES LIMITED
Polyester — Hub Chowki (yarn)

POLYTEX
Polyester — (yarn)

PAKISTAN (continued)

RAVI RAYON LIMITED
Acetate — Kala Shah Kaku, Sheikhupura District *Krasil* (yarn)

RUPALI POLYESTER LIMITED
Polyester — Karachi* (yarn & staple)

S.G. RAYON MILLS LIMITED
Polyester — Karachi (yarn)

SYNTHETIC POLYLON
Polyester — Katri (yarn), Hub Chowki (staple)

PERU

BAYER INDUSTRIAL S.A.
Acrylic — Lima *Dralon* (staple)

FILAMENTOS INDUSTRIALES, S.A.
Nylon 6 — Lima* (yarn)
Polyester — Lima (yarn)

MANUFACTURA NYLON S.A.
Nylon 6 — Vitarte, near Lima (yarn)
Polyester — Vitarte *Diolen* (staple)

MANUFACTURAS DEL SUR S.A.
Nylon 6 — Arequipa *Long Life, Mistlon* (yarn)
Polyester — Arequipa (yarn & staple)

RAYON Y CELANESE PERUANA S.A.
Acetate — Lima (yarn)
Nylon — Lima (staple)
Polyester — Lima *Forcel* (yarn, staple, tow & tops)

RETEX PERUANA, S.A.
Nylon 6 — Ventanilla, Callao (yarn)

OLEFIN FILM FIBER,only

NORSAC S.A. Trujillo

POLICEL DEL PERU S.A. Lima

SACOS DEL SUR S.A. Arequipa

SACOS PISCO S.A. Pisco

PHILIPPINES, REPUBLIC OF THE

AMERICAN PHILIPPINE FIBER INDUSTRIES, INC.
Nylon 6 — San Pedro, Laguna *Apfi Nylon* (yarn)
Polyester — San Pedro *Apfi Polyester* (yarn)

FILIPINAS SYNTHETIC FIBER CORPORATION
Polyester — Sta. Rosa, Laguna *Filsyn* (yarn & staple)

LAKEVIEW INDUSTRIAL CORPORATION
Polyester — Carmona, Rizal *Licron* (yarn & staple)

PHILIPPINE POLYAMIDE INDUSTRIAL CORPORATION (PPIC)
Nylon 6 — Calamba, Laguna *Philippine Polyamide* (yarn)

TEXFIBER CORPORATION
Nylon 6 — Taytay, Rizal *Texfiber* (yarn)

PHILIPPINES, REPUBLIC OF THE (continued)

OLEFIN FIBER

INDUSTRIAL TEXTILE MANUFACTURING CO. (ITEMCOP)
Mandaluyong, Rizal (P film)

MANILA CORDAGE COMPANY Manila (P film)

POLAND

CHODAKOWSKIE ZAKŁADY WŁOKIEN CHEMICZNYCH "CHEMITEX"
Rayon — Sochaczew (reg yarn)

WROCŁAWSKIE ZAKŁADY WŁOKIEN CHEMICZNYCH "CHEMITEX"
Rayon — Wrocław (reg yarn)

ZAKŁADY WŁOKIEN CHEMICZNYCH "CHEMITEX-ANILANA"
Acrylic — Łódz *Anilana* (staple)
Azlon — Łódz *Wipolan* (staple, casein base)

ZAKŁADY WŁOKIEN CHEMICZNYCH "CHEMITEX-CELWISKOZA"
Polyester — Jelenia Góra *Elana* (staple)
Rayon — Jelenia Góra (staple)
Spandex — Jelenia Góra (pilot plant) *Elaston* (yarn)

ZAKŁADY WŁOKIEN CHEMICZNYCH "ELANA"
Polyester — Torun, Bydgoszcz *Torlen* (yarn), *Elana* (staple)

ZAKŁADY WŁOKIEN CHEMICZNYCH "STILON"
Nylon 6 — Gorzów Wielkopolski *Lanastil, Stilon* (yarn), *Polana* (staple)

ZAKŁADY WŁOKIEN CHEMICZNYCH "CHEMITEX- WISKORD"•
Rayon — Szczecin-Zydowce (reg yarn)

ZAKŁADY WŁOKIEN CHEMICZNYCH "CHEMITEX-WISTOM"
Rayon — Tomaszów Mazowiecki, Łódz (ind & reg yarn & staple)

OLEFIN FIBER

ZAKŁADY PRZEMYSŁU LNIARSKIEGO LENKO Bielsko-Biala (P film)

ZAKŁADY PRZEMYSŁU LNIARSKIEGO SKARBKOW Mirsk, Wrocław (P staple)

ZAKŁADY WŁOKIEN CHEMICZNYCH "CHEMITEX-WISKORD"
Szczecin-Zydowce (P staple)

GLASS FIBER

KROSNIENSKIE HUTY SZKLA Krosno

ZAKŁADY WŁOKIEN CHEMICZNYCH "CHEMITEX-ANILANA"
Łódz *Polsilon*

PORTUGAL

COMPANHIA INDUSTRIAL DE FIBRAS ARTIFICIAIS (CIFA), S.A.R.L.
Nylon 6 — Sobrado, Valongo *Cifalon* (yarn)
Rayon — Sobrado (reg yarn & staple)

FIBRAS SINTÉTICAS DE PORTUGAL, S.A.R.L. (FISIPE)
Acrylic — Lisbon *Vonnel* (staple, tow & tops)

PORTUGAL (continued)

FINICISA - FIBRAS SINTÉTICAS, S.A.R.L.
Polyester — Portalegre, Alto Alentejo *Terylene* (staple)

TÊXTIL ARTIFICIAL DO PORTO, LDA.
Rayon — Porto (reg yarn)

OLEFIN FIBER
ALICATIFAS DA LOUSA (P staple)

FERCOL (P staple)

LUSOTUFO (P staple)

QUIMIGAL - QUIMICA DE PORTUGAL, E.P. Barreiro (P staple & film)

OLEFIN FILM FIBER, only

CERFIL Maia - Douro

CORDEX - COMPANHIA INDUSTRIAL TEXTIL, S.A.R.L. Esmoriz

COTESI - COMPANHIA DE TEXTEIS SINTÉTICOS S.A.R.L. Carvalhos

EUROFIL - INDUSTRIAS DE PETROLEOS PLASTICOS E FILAMENTOS, S.A.R.L. Lisbon

FÁBRIGA DE TAPETES VITÓRIA Mira d'Aire

FERNANDES & COSTA, LDA. Seia

MANUEL RODRIGUES DE LIMA & FILHOS Cortegaca

MANUEL RODRIGUES D'OLIVEIRA, S.A. LDA. M. Maia

QUINTAS & QUINTAS Povoa de Varzim

SICOR - SOCIEDADE INDUSTRIAL DE CORDOARIA S.A.R.L. Cortegaca

GLASS FIBER

QUIMIGAL - QUIMICA DE PORTUGAL, E.P. • Barreiro

ROMANIA

COMBINATUL DE FIBRE ARTIFICIALE
Rayon — Braila, Dej* & Suceava* (ind yarn & staple)
Polyester — Vaslui (yarn)

FABRICA DE FIBRE ARTIFICIALE "VISCOFIL"
Rayon — Popesti-Leordeni, near Bucuresti (reg yarn)

FABRICA DE FIBRE ARTIFICIALE "VISCOZA"
Rayon — Lupeni (reg yarn)

UZINA DE FIBRE SINTETICE IASI
Polyester — Iasi *Teron* (yarn, staple, tow & tops)

UZINA DE FIBRE SINTETICE SAVINESTI
Acrylic — Savinesti, near Piatra Neamt (Bacau Region) *Melana* (staple & tops)
Nylon 6 — Savinesti *Relon* (yarn & staple)

SOUTH AFRICA, REPUBLIC OF

CONSOLIDATED TEXTILE MILLS (part of Frame Group of Companies)
Polyester — Jacobs, Natal (yarn & staple - captive)

HOECHST SOUTH AFRICA (PTY.) LTD.
Polyester — Milnerton, Cape Province *Trevira* (staple)

SOUTH AFRICAN NYLON SPINNERS (PTY.) LIMITED
Nylon 66 — Bellville, Cape Province *Bri-Nylon* (yarn)
Polyester — Bellville & Hammarsdale, Natal *Terylene* (yarn)

OLEFIN FIBER

ROMATEX MILLS Jacobs, Natal (P film)

SPAIN

BRILEN S.A.
Polyester — Barbastro, Huesca & Igualada, Barcelona (yarn & staple)

COURTAULDS FIBRES S.A.
Acrylic — Prat de Llobregat, Barcelona *Crilenka* (staple & tow)

DE FIBER S.A.
Nylon 66 — Vendrell, Tarragona

INDUSTRIAS DEL ACETATO DE CELULOSA, S.A. (INACSA)
Acetate — La Batllona, Barcelona (yarn)

INDUSTRIAS QUIMICAS TEXTILES S.A. (INQUITEX)
Nylon 6 — Andoain, Guipuzcoa *Carbyl, Nylhair, Trinyl* (yarn & staple)

LA SEDA DE BARCELONA, S.A.
Nylon 6 — Alcalá de Henares, Madrid *Dayan, Enkalon* (yarn & staple)
Polyester — Prat de Llobregat, Barcelona *Terlenka* (yarn & staple)
Rayon — Prat de Llobregat (ind & reg yarn)

MONTEFIBRE HISPAÑIA S.A.
Acrylic — Miranda de Ebro, Burgos *Leacril* (staple)

NUREL S.A.
Nylon 6 — Zaragoza, Zaragoza *Nurel* (yarn)
Polyester — Zaragoza *Terylene* (yarn & staple)

SOCIEDAD ANONIMA DE FIBRAS ARTIFICIALES (SAFA)
Nylon 66 — Blanes & San Julian de Ramis, Gerona *SAFA* (yarn & staple)
Polyester — Blanes *Tergal, Teriber* (yarn & staple)

SOCIEDAD NACIONAL DE INDUSTRIAS APLICACIONES CELULOSA ESPAÑOLA, S.A. (SNIACE)
Nylon 6 — Torrelavega, Santander *Lilion* (yarn & staple)
Rayon — Torrelavega (staple)

OLEFIN FIBER

PAULAR, S.A. - EMPRESA PARA LA INDUSTRIA QUIMICA
Puertollano, C.R. *Istrakin* (P monofil & film)

PROFILEX (P staple)

PROPILAN (P staple)

SERINA TEXTIL (P staple)

SOCIEDAD ANONIMA ITALO ESPAÑOLA (SAITES) Sabadell, Barcelona (P staple & film)

SPAIN (continued)

TEXTILE ARMENGOL Bruch, Barcelona (P staple & film)

OLEFIN FILM FIBER, only

CONDEROLS S.A. Granada

CORDELERIAS BARAS S.A. Gijon, Asturias

CORDELERIAS MAR S.A. Vigo, Pontevedra

HILATURAS Y CORDELERIA S.A. - "HILCOSA" Barcelona

HIRESA Callosa de Segura, Alicante

YUTE INDUSTRIAL S.A. Valéncia

GLASS FIBER

FIBRAS MINERALES, S.A. Alcalá de Henares, Madrid *Vitrofex*

SRI LANKA

CEYLON PETROCHEMICAL CORPORATION
Nylon 6 — Sapugaskan (yarn & monofil)

SWEDEN

SONESSON PLAST AB •
Nylon 6/66 — Malmö (monofil)

SVENSKA RAYON AKTIEBOLAGET
Rayon — Alvenäs, Valberg (reg yarn & staple)

OLEFIN FIBER

SONESSON PLAST AB Malmö *Laveten* (E & P monofil)

GLASS FIBER

SCANDINAVIAN GLASFIBER AKTIEBOLAG Falkenberg

SWITZERLAND

EMS INDUSTRIES, LTD.
Nylon 6 — Ems, Graubünden *Grilon* (staple)
Polyester — Domat/Ems *Grilene* (staple)

NOYFIL S.A.
Nylon 6 — Stabio (yarn)
Polyester — Stabio (yarn)

VISCOSUISSE A.G.
Nylon 6/66 — Emmenbruecke, Luzern & Widnau, St. Gallen *Nylsuisse, Flixor* (yarn & staple)
Polyester — Widnau *Tersuisse* (yarn)

OLEFIN FILM FIBER, only

AROVA SCHAFFHAUSEN A.G. Schaffhausen

VOGT & CO. Reinach

TAIWAN

CENTURY EVERGREEN CORP.
Polyester — Tainan *Centuron* (yarn)

CHENTA CHEMICAL INDUSTRIAL CORPORATION
Nylon 6 — Kaohsiung *Rabbit* (yarn)

CHI YURN FIBER MILLS
Nylon — Tao Yuan (staple)

CHINA MAN-MADE FIBER CORPORATION
Rayon — Tou Fen *Queen* (reg yarn & staple)

CHUNG SHING TEXTILE CO., LTD.
Nylon 6 — Tao Yuan *Tasinlon, Threegun* (yarn)
Polyester — Tao Yuan *Tasinlon* (yarn & staple)

FAR EASTERN LTD.
Polyester — Hsin Chu *Eastlene, Eastlon* (yarn & staple)

FORMOSA CHEMICALS & FIBER CORPORATION
(part of Formosa Plastics Group)
Nylon 6 — Chang Hwa *Sunylon* (yarn)
Rayon — Chang Hwa *Tarsiyon* (reg yarn & staple)

FORMOSA PLASTIC CORPORATION - Tairylan Plant
(part of Formosa Plastics Group)
Acrylic — Kaohsiung & Lanchu *Tairylan* (staple, tow & tops)

HSIEH CHIN FISHING NET COMPANY, LTD. •
Nylon 6 — Kaohsiung *Hsieh Chin* (monofil - captive)

HUALON - TEIJIN CORPORATION
Nylon 6 — Chungho, Tao Yuan & Tou Fen (yarn)
Polyester — Chungho, Tou Fen & Yim Kao *Hualon* (yarn & staple)

HUNG CHOU CHEMICAL INDUSTRY COMPANY, LTD.
Polyester — Kwei Shan *Hunvira* (yarn)

JANG DAH NYLON INDUSTRIAL CORP., LTD.
Nylon 6 — Hsin Tien *Yuan Pao* (yarn)

LIEN YU INDUSTRIAL COMPANY, LTD.
Nylon 6 — Lin Tu *Pagoda* (yarn)
Polyester — Lin Tu *Pagoda* (yarn)

NAN-YA PLASTIC CO., POLYESTER FIBER DIVISION (part of Formosa Plastics Group)
Polyester — Tai Shan *Tainlin* (yarn & staple)

PACIFIC ENTERPRISES LTD.
Nylon 6 — Tao Yuan *P.E.L.* (yarn)
Polyester — Tao Yuan (yarn)

SAN YUAN HSING ENTERPRISE COMPANY
Nylon 6 — Kaosiung (monofil - captive)

SHINKONG SYNTHETIC FIBERS CORPORATION
Polyester — Tao Yuan *Shinlon* (yarn & staple)

SYNTHETIC FIBER MILLS CORPORATION
Nylon 6 — Tao Yuan *Synlon* (yarn)

TA MING FIBERS INDUSTRIAL CORPORATION
Nylon 6 — Tao Yuan *Ta Ming Nylon* (yarn)
Polyester — Tao Yuan *Poylon* (yarn)

TAINAN SPINNING CO., LTD.
Polyester — Tainan *Nanlon* (yarn)

TONG HWA SYNTHETIC FIBER CO., LTD.
Acrylic — Chu Pei *Townflower* (staple & tow)

TAIWAN (continued)

TUNG HO SPINNING WEAVING & DYEING CO., LTD.
Polyester — Tainan *Pearlylene* (staple)

TUNTEX DISTINCT CORP.
Polyester — Hsin Su *Tuntex* (yarn)

UNITED SYNTHETIC FIBERS CORPORATION
Polyester — Tao Yuan *King Long* (staple)

VANLON FIBERS INDUSTRIAL CORPORATION
Nylon 6 — Tao Yuan *Vanlon* (yarn)
Polyester — Tao Yuan *Vanlon* (yarn)

YU HO FIBER INDUSTRIAL CORPORATION
Polyester — Tao Yuan *Luxlen* (yarn)

YUNG CHIN FIBER CO., LTD.
Nylon 6 — Kaohsiung *Hailon* (yarn)

OLEFIN FIBER

CHIA YANG INDUSTRIAL CO., LTD. Hsi-Chih (P monofil)

CHIEN SUN PLASTIC INDUSTRIAL CO., LTD. Hsin-Chu (E & P film)

CHINA FOLEX CORPORATION Shih-Lin (E & P monofil)

CHUNG KUANG PLASTIC CO., LTD. Chang-Hua (E & P film)

FULLMARK INDUSTRIAL CO., LTD. Hsin-Chu (E & P monofil)

FUU WON CHEMICAL INDUSTRIAL CO., LTD. Tu-Chen (P yarn)

HSIEH CHIN FISHING NET COMPANY, LTD. Kaohsiung *Hsieh Chin* (E monofil - captive)

HUNG FENG ENTERPRISE CO., LTD. Yang-Mei (P monofil)

IEN YI FIBER INDUSTRIAL CO., LTD. Chi-Do Goble (E monofil)

JUI I CHEMICAL INDUSTRIAL CO., LTD. Tou-Yuan (E & P monofil)

KUO HSIANG ENTERPRISE CO., LTD. Yang-Mei (E & P monofil)

LIEN FU CHEMICAL COMPANY LTD. Tou-Fen (E & P monofil)

MEI LON FIBER CO., LTD. Chang-Hua (E monofil)

PAO TSUNG TAI INDUSTRIAL COMPANY LTD. Tainan (P film)

POLON FIBER INDUSTRIAL CO., LTD. Chung-Li (P monofil)

SAN YANG INDUSTRIAL COMPANY LTD. Nei Hu Hsiang (P film)

TAI YEE CHEMICAL INDUSTRIAL CO., LTD. Chung-Li (E & P monofil)

UNITED FIBER INDUSTRIAL CO., LTD. Chung-Li (E & P monofil)

YAO CHENG PLASTIC CO., LTD. Pan-Chiao (P yarn)

TANZANIA

SUN FLAG TEXTILE KNITWEAR MILLS LTD.
Polyester — Arusha (yarn)

THAILAND

ASIA FIBER CO., LTD.
Nylon 6 — Samut Prakarn *AFC* (yarn)

HANTEX CORPORATION LTD.
Nylon 6 — Mahacha, Samut Sakorn (yarn)

ORIENTAL FIBRE
Polyester — Samut Sakorn (yarn)

TEIJIN POLYESTER (THAILAND) LTD.
Polyester — Pathumthani, Bangkok *TEIJIN TETORON* (yarn & staple)

THAI MELON POLYESTER CO. LTD.
Polyester — Pathumthani, Bangkok (yarn & staple)

THAI RAYON CO., LTD.
Rayon — Ang Thong (staple)

TORAY NYLON THAI COMPANY
Nylon 6 — Bangkhen, Bangkok *TNT* (yarn & monofil)
Polyester — Bangkhen *TNT* (yarn)

TURKEY

AKRILIK KIMYA SANAYII A.S. (AKSA)
Acrylic — Yalova *Aksa* (staple)

FILAMENT SENTETIK IPLIK VE ELYAF SANAYII A.S.
Polyester — Bursa *Filament* (yarn & staple)

GEMLIK SUNI IPEK VE VISKOZ MAMULLERI SANAYII MÜESSESESI (GEMLIK ARTIFICIAL SILK & VISCOSE PRODUCTS INDUSTRY) (Operated by the Sumerbank)
Rayon — Gemlik (staple)

INSA ISTANBUL NAYLON SANAYII A.S.
Nylon 6 — Istanbul *Isilon* (yarn)
Polyester — Istanbul (yarn)

M.N. SABUNCU
Polyester — Adana *MNS* (yarn) (idle)

NERGIS A.S.
Polyester — Bursa (yarn)

POLYLEN SENTETIK IPLIK SANAYII A.S.
Polyester — Bursa *Polylene* (yarn)

SANCAK TÜL SANAYII LTD., STI.
Polyester — Istanbul *Lalelen* (yarn) (idle)

SASA SUNI VE SENTETIK ELYAF SANAYII A.S.
Polyester — Adana *Perilon* (yarn & staple)

SENTETIK IPLIK FABRIKALARI, A.S. (SIFAS) (SYNTHETIC YARN FACTORIES CORPORATION)
Nylon 6 — Bursa *SIFAS* (yarn & staple)
Nylon 66 — Bursa (yarn)
Polyester — Bursa (yarn & staple)

SISAS
Polyester — Canakkale* (yarn)

TEKSTIPLIK SANAYII VE TICARET A.S.
Nylon 6 — Edirne *Dimlon* (yarn)

YALOVA ELYAF VE IPLIK SANAYII VE TICARET A.S.
Acrylic — Yalova *Yalova* (staple & tow)
Modacrylic — Yalova *Yalova* (staple & tow)

TURKEY (continued)

OLEFIN FIBER

BEZCI ELYAF SANAYII A.S. Istanbul

DINARSU ELYAF SANAYII A.S. Cerkezkoy, Tekirdag (P staple)

ELSAN ELYAF SANAYII VE TICARET A.S. Istanbul (P staple)

HALICIOGLU ELYAF SANAYII A.S. Haskoy, Istanbul (P staple)

SESAS ELYAF SANAYII A.S. Istanbul

GLASS FIBER

CAM ELYAF SANAYII A.S. Cayirova-Gebze (Izmit)

UNION OF SOVIET SOCIALIST REPUBLICS

RAYON PLANTS reported at:
Balakovo, Barnaul, Cherkassy (Ukraine), Kalinin, Kamensk, Kiev, Klin, Krasnoyarsk, Leningrad, Mogilev, Ryazan, Saratov, Sokol, Sverdlovsk and Svetlogorsk.
ACETATE PLANTS reported at:
Engels, Fergana, Kaunas, Kirovakan and Moscow.
NYLON PLANTS reported at:
Barnaul, Chernigov, Daughavpils, Engels, Grodno, Kemerovo, Kiev, Klin, Leningrad, Rustavi, Shchekino and Zhitomer.
NONCELLULOSIC FIBER PLANTS reported at:
Kursk (polyester), Blagoveshchensk (polyester*), Kustanay (vinyon), Minsk (polyester), Mogilev (polyester), Navoi, Polotsk and Saratov (acrylic+modacrylic), Svetlogorski (polyester).
GLASS FIBER PLANTS reported at:
Astrakhan, Kalinin, Khabarovsk, Leningrad, Mingechaur, Moscow, Polotsk, Salavat, Saratov, Sevan and Severodonetsk.

UNITED KINGDOM

ANGLIA FIBRES PLC •
Polyester — Hadleigh, Suffolk (monofil)
Polyvinylfluoride — Hadleigh *Kynar* (monofil)
Saran — Hadleigh *Saran* (monofil)

COURTAULDS FIBRES LTD.
Acrylic — Grimsby, Lincolnshire *Courtelle* (staple & tow)
Modacrylic — Coventry, West Midlands *Teklan* (staple & tow)
Rayon — Grimsby (staple & tow)
Acetate — Coventry; Spondon, Derbyshire *Dicel* (yarn, staple & tow)
Triacetate — Coventry & Spondon *Tricel* (yarn & staple)

DEAN DOVE LTD.
Polyester — Stanley, Durham (yarn)

DU PONT (U.K.) LTD.
Spandex — Maydown, Londonderry, N. Ireland *Lycra* (fused multifil)

HOECHST FIBRE INDUSTRIES U.K. LTD.
Polyester — Limavady, Londonderry, N. Ireland *Trevira* (yarn & monofil)

ICI FIBRES (a division of Imperial Chemical Industries PLC)
Biconstituent — Pontypool, Gwent, Wales; Workington; Cumbria *Cambrelle, Floratex, Terram* (melded fabrics)
Nylon 66 — Doncaster, Yorkshire; Gloucester, Gloucestershire; & Pontypool *Bri-Nylon, Bucion, Counterstat, Limbaki, Pavanne, Cazel, Quintesse, Tactel, Timbrelle* (yarn, staple & tow)
Polyester — Pontypool & Wilton, Yorkshire *Limbaki, Mitrelle, Superloft, Terinda, Terylene* (yarn, staple & tow)

UNITED KINGDOM (continued)

NYMOFIL PLC

Nylon 6 & 66	Poulton-le-Fylde, Lancashire (monofil)
Polyester	Poulton-le-Fylde (monofil)

PERI-LUSTA PLC

Nylon 6/66	Leek, Staffordshire (monofil)

OLEFIN FIBER

AMOCO FABRICS & FIBERS CO., DIVISION OF AMOCO (U.K.) PLC Consett, Durham (P film)

ANGLIA FIBRES PLC Hadleigh, Suffolk *TPX* (E & P monofil)

BELFAST ROPEWORK CO. PLC Belfast, N. Ireland *Bluebell* (E & P monofil, P yarn, staple & film)

CROMPTION AND BROTHERS (P staple)

DON FIBRES PLC Forfar, Angus, Scotland (P yarn, monofil, staple & film)

F. DRAKE (FIBRES) PLC Colcar, Huddersfield, Yorkshire *Gymlene* (P staple)

FILTRONA TEXTILE PRODUCTS PLC Dundee, Angus, Scotland *Filtrona* (P film; *Filtrona Fibre* (P staple)

FLEMMING'S ROPE & TWINES (WOOLSTON) PLC Warington, Lancashire (P monofil)

GREENVILLE CARPETS PLC Belfast, N. Ireland (P yarn)

HALL'S BARTON ROPERY CO. PLC Hull, Yorkshire (P film and E & P monofil)

THE HAWKINS AND TIPSON GROUP Hailsham, East Sussex (P staple & film)

McCLEERY L'AMIE GROUP PLC Belfast, N. Ireland (P yarn)

NORTHERN IRELAND CARPETS PLC Belfast, N. Ireland (P staple)

PLASTICISERS PLC Drighlington, Yorkshire *Drylene* (E monofil); *Charisma, Duron, Fibrite, Tritor* (P yarn, monofil, film & staple)

POLYOLEFIN FIBRES & ENGINEERING PLC Bradford, Yorkshire *Downspun* (P staple)

OLEFIN FILM FIBER, only

BONAR TEXTILES PLC Dundee, Angus, Scotland

BRIDON FIBRES & PLASTICS PLC Gateshead & Sunderland, Durham & Wallsend, Northumberland *Broplene, Red Star, Viking*

FAIRBAIRN LAWSON PACKAGING PLC Barnsley, Yorkshire

POLYTAPE PLC Dundee, Angus, Scotland *Propafil, Propatape*

ROKO CONTAINERS Nottingham

ROTHES PLASTICS PLC Glenrothes, Fife, Scotland

SMITH & NEPHEW POLYFABRIK PLC Newhey, near Rochdale Lancashire *Polyweave*

SYNTHETIC FABRICS (SCOTLAND) PLC Forfar, Angus

UNITED KINGDOM (continued)

SYNTHETIC INDUSTRIES (IRELAND) PLC Newry, Down, N. Ireland

TALBOT WEAVING CO. PLC Chorley, Lancashire

TAY TEXTILES Dundee, Angus, Scotland

GLASS FIBER

FIBREGLASS PLC (Subsidiary of Pilkington Brothers PLC) Wrexham, Clwyd, Wales *Fiberglass*

T GLASS FIBRES PLC Camberley, Surrey & Hindley Green, Lancashire

FIBREGLASS-REGINA, a joint venture of FIBREGLASS PLC and the BBA GROUP PLC, is producing textile glass tissue (viole) at Liversedge and St. Helens, Merseyside.

UNITED STATES OF AMERICA

ALBANY INTERNATIONAL - MONOFILAMENT PLANT •

Fluoro	Homer, NY *Halar, Kynar, Teflon, Tefzel* (monofil)
Nylon 6, 66 & 612	Homer (monofil)
Polyester	Homer (monofil - regular & hydrolysis-resistant)

ALLIED/SIGNAL FIBERS DIVISION •

Nylon 6	Columbia, SC & Chesterfield, VA *A.C.E., Anso, Anso-X, Anso IV HP, Anso IV HP with HaloFresh, Anso IV with HaloFresh, TEC, Caprolan 2000, Caprolan 2000 SeaGard, Caprolan, Captiva* (yarn, monofil & staple)
Polyester	Moncure, NC *A.C.E.* (yarn & monofil)

AMERICAN CYANAMID COMPANY, FIBERS DIVISION

Acrylic	Milton, FL *Creslan* (staple & tow)

AMERICAN HOECHST CORPORATION, HOECHST FIBERS INDUSTRIES DIVISION

Polyester	Spartanburg, SC *Trevira* (yarn, monofil, staple & spunbond)

AMETEK INC., SPECIAL FILAMENTS DIVISION •

Nylon 6, 66, 612 & 11	Odenton, MD (monofil)
Polyester	Odenton (monofil)
Saran	Odenton (monofil)

AVTEX FIBERS INC. •

Polyester	Lewistown, PA *Avlin* (yarn)
Rayon	Front Royal, VA (ind yarn & staple)

BASF CORPORATION FIBERS DIVISION

Acrylic	Williamsburg, VA *Zefran, Zefkrome* (staple)
Nylon 6	Enka, NC, Anderson & Central, SC and Lowland, TN *Anti-Cling Crepeset, Crepeset, Enkalon, Enkalure, Enkasheer, Lurelon, Softalon, T.E.N., Zeftron* (yarn & staple)
Polyester	Lowland *Crepesoft, Encron, Encron 8, Enka, Golden Glow, Golden Touch, Matte Touch, Ply Loc, Polyestra, Shanton, Silky Touch, Ultra Touch* (yarn & staple)
Rayon	Lowland *Absorbit, Enkaire, Enkrome, Fiber 700, IT* (staple)

BERKLEY & CO., INC. •

Nylon 6	Spirit Lake, IA (monofil)

CAMAC CORPORATION •

Nylon 6	Bristol, VA *Camalon* (yarn)

UNITED STATES (continued)

CELANESE FIBERS, A DIVISION OF CELANESE CORPORATION (includes former Fiber Industries plants)

Acetate	Rock Hill, SC Celriver & Narrows, VA (Celco) (yarn, staple & tow)
Polyester	Fayetteville, Salisbury & Shelby, NC and Darlington & Greenville, SC *Angelette, Ceylon, Comfort Fiber, ESP, Fortrel, Loftguard, PolarGuard, Serene, Superba* (yarn, staple, tow & fiberfill)
Triacete	Rock Hill *Arnel* (yarn, staple & tow)
PBI	Rock Hill (staple)

CORTLAND LINE COMPANY

Nylon 6	Cortland, NY (monofil - captive)

COURTAULDS NORTH AMERICA INC.

Nylon 6	Le Moyne, Mobile County, Al *Courtaulds, Shareen* (yarn & monofil)
Rayon	Le Moyne (staple)

E.I. DU PONT DE NEMOURS & COMPANY (INC.) •

POLYMER PRODUCTS DEPARTMENT

Nylon 6, 66, 612 & Polyester	Parkersburg, WV *Dacron, Dymetrol, Tynex, Vylor* (monofil of 50 denier & coarser)

TEXTILE FIBERS DEPARTMENT •

Acrylic	Camden, SC & Waynesboro, VA *Orlon* (staple & tow)
Aramid	Richmond, VA *Kevlar* (yarn), *Nomex* (yarn, staple & tow)
Nylon 66	Seaford, DE, Camden, SC, Chattanooga, TN and Martinsville, Richmond & Waynesboro, VA *Antron, Cantrece, Cordura, Du Pont, Hyten* (yarn, monofil, staple & tow)
Polyester	Kinston & Wilmington, NC, Camden & Charleston, SC and Chattanooga & Old Hickory, TN *Dacron, Hollofil* (yarn, staple, tow & fiberfill), *Reemay* (spunbonded), *Sontara* (spunlaced)
Spandex	Waynesboro *Lycra* (fused multifill or coalesced monofil)

EASTMAN KODAK COMPANY

TENNESSEE EASTMAN COMPANY

Acetate	Kingsport, TN (yarn)
Polyester	Kingsport, TN, Columbia, SC *Kodel* (yarn & staple)

FIBER INDUSTRIES, INC. - See Celanese Fibers

FIRESTONE FIBERS & TEXTILES COMPANY, DIVISION OF FIRESTONE TIRE & RUBBER COMPANY

Polyester	Hopewell, VA (yarn)

FOSS MANUFACTURING CO., INC. •

Polyester	Haverhill, MA (staple - captive)

GLOBE MANUFACTURING CO.

Spandex	Fall River, MA & Gastonia, NC *Cleerspan, DC-100, DC-700, Glospan* (fused multifil)

THE GOODYEAR TIRE & RUBBER COMPANY, CHEMICAL DIVISION

Polyester	Scottsboro, AL & Point Pleasant, WV (yarn - captive)

GUILFORD MILLS, GAINESVILLE DIVISION

Nylon 6	Gainesville, GA (yarn & monofil - captive)

HANOVER MILLS, INCORPORATED (subsidiary of Falk Fibers & Fabrics, Inc.)

Nylon 6	Yanceyville, NC *Hanover* (yarn & monofil)

UNITED STATES (continued)

JOHNSON FILAMENTS, INC. • (subsidiary of JWI Ltd.)

Nylon 6/66	Williston, VT (monofil)
Polyester	Williston (monofil)

KAYSER-ROTH CORPORATION, YARN PROCESSING DIVISION

Nylon 66	Creedmoor, NC (yarn - captive)

MONOFILAMENTS, INC.

Nylon 6/66	Waynesboro, VA (monofil)
Polycarbonate	Waynesboro (monofil)
Polyester	Waynesboro (monofil)

MONSANTO COMPANY

MONSANTO FIBERS AND INTERMEDIATES CO.

Acrylic	Decatur, AL *Acrilan, Bi-Loft, Fi-Lana, Fondelle, Pa-Qel, Remember, So-Lara* (staple & tow)
Modacrylic	Decatur *SEF* (staple & tow)
Nylon 66	Pensacola, FL & Greenwood, SC *Ultron* (yarn, monofil & staple)

MONOSANTO PLASTICS AND POLYMERS COMPANY

Nylon 66	Pensacola *Astro Turf* (recreational & landscaping surfaces)

NORTH AMERICAN RAYON CORPORATION

Rayon	Elizabethton, TN (ind & reg yarn & tow)

SHAKESPEARE COMPANY, MONOFILAMENT DIVISION

Nylon 6/66	Columbia, SC *S_3 Superflex, Wonderthread, Whispertouch* (monofil)
Polyester	Columbia *Shakespeare Wonderthread* (monofil)

STAR FIBERS, INC.

Nylon 6	Edgefield, SC *Starbrite* (staple)

SUNSHINE CORDAGE CORPORATION •

Nylon 6	Miami, FL *Sunylon* (yarn)

TOLARAM FIBERS, INC.

Polyester	Ansonville & Asheboro, NC (yarn)

UNIVERSAL POLYMER PRODUCTS CORPORATION (subsidiary of Falk Fibers & Fabrics, Inc.)

Polyester	Fuquay-Vanna, NC (yarn & monofil)

WELLMAN, INC., MAN-MADE FIBER DIVISION

Nylon 6 & 66	Johnsonville, SC *Wellon, Wellstrand* (staple, tow & tops)
Polyester	Johnsonville *Fillwell, Wellene, Wellstrand* (staple & tow)

YKK ZIPPER CO.

Polyester	Macon, GA (yarn)

OLEFIN FIBER

ACS INDUSTRIES, INC. Woonsocket, RI (P yarn & multifil)

ALADDIN CARPETS, INC. Dalton, GA (P yarn)

ALBANY INTERNATIONAL - MONOFILAMENT PLANT Homer, NY (P monofil)

ALLIED/SIGNAL, FIBERS DIVISION Chesterfield, VA *Spectra-900, Spectra-1000* (E yarn)

AMERICAN MANUFACTURING COMPANY

LAFAYETTE ROPE DIVISION Lafayette, LA *Amco, American, Bondtie, Floterope* (E & P monofil)

UNITED STATES (continued)

AMERICAN POLYCRAFT Dalton, GA (P yarn & film)

AMETEK INC., SPECIAL FILAMENTS DIVISION Odenton, Md (E & P monofil)

AMOCO FABRICS & FIBERS COMPANY Andalusia & Roanoke, AL, Bainbridge, Hazlehurst & Nashville, GA, Lowell, NC & Afton, VA *Marquésa Lana, Patlon, Patlon Plus, Propex III* (P yarn, monofil, film & staple)

ARLIN MFG. CO., INC. Lowell, MA (P film)

ARMSTRONG WORLD INDUSTRIE$, INC. Charlotte, NC (P film - captive)

AVTEX FIBERS INC. Front Royal, VA (P staple)

BEAULIEU OF AMERICA Dalton, GA (P yarn)

BEMIS COMPANY, INC. St. Louis, MO (P film)

BERKLEY & CO. INC. Spirit Lake, IA (E & P monofil - captive)

BLUE MOUNTAIN EXTRUSIONS Anniston, AL *Gold Medal, Poly Autotwine, Poly Macramé, Polylasting, TY-EZ Polytape, Tylon, Tyste* (E & P film)

BRIDON CORDAGE INC. Albert Lea, MN (P film)

BURLINGTON, INC. Greensboro, NC (P yarn)

CAMAC CORPORATION Bristol, VA (P yarn)

CHASE BAG COMPANY Portland, OR (P film & industrial goods)

CIRTEX Dalton, GA (P film)

COLUMBIAN ROPE COMPANY Guntown, MS *Polypro 6* (E & P monofil & film)

CONCORDE FIBERS, INC. Jamestown, SC (P yarn)

CROWE ROPE COMPANY Warren, ME *Crowelon* (P monofil)

CROWN ZELLERBACH CORPORATION, NONWOVEN FABRICS DIVISION Washougal, WA *Celestra, Fibretex* (P spunbonded)

CUMBERLAND MILLS, INC. Dalton, GA (P yarn)

CUTLASS CARPET CO. Dalton, GA (P yarn)

DIAMOND MILLS, INC. Eton, GA (P yarn & film)

DORSETT CARPET MILLS INC. Chatsworth, GA (P yarn)

E.I. DU PONT DE NEMOURS & COMPANY (INC.), TEXTILE FIBERS DEPT. Old Hickory, TN & Richmond, VA *Typar* (P spunbonded); *Tyvek* (E spunbonded)

ELIZABETH WEBBING MILLS CO., INC. Central Falls, RI (P yarn & film)

ENSIGN-BICKFORD INDUSTRIES, INC., FILM FIBERS DIVISION Simsbury, CT (P film)

EXXON CHEMICAL AMERICAS, INDUSTRIAL TEXTILES DIVISION Kingman, KS & Summerville, SC (P monofil & film)

UNITED STATES (continued)

FIBERS & FABRICS OF GEORGIA, INC. (subsidiary of Georgia Synthetics, Inc.) Elberton, GA (E & P yarn, monofil & multifil)

FIBRES SOUTH, INC. Trussville, AL *Polystar, Trustite, Tyrite* (P film, monofil & staple)

FIBRON CORPORATION OF TENNESSEE (subsidiary of Harbour Group Ltd.) Chattanooga, TN *Fibri-Cord, Fibri-Knit, Fibrilawn, Fibrilon* (P film)

FILAMENT FIBER TECHNOLOGY INCORPORATED Lakewood, NJ (P yarn)

FNT INDUSTRIES INC. Menominee, MI (E monofil)

FOSS MANUFACTURING CO., INC. Haverhill, MA (P staple - captive)

GENERAL FIBERS & FABRICS, INC. La Grange, GA (P film)

GEORGIA SYNTHETICS, INC. Elberton, GA (E & P yarn, monofil & film)

GLADDING, CORDAGE CORPORATION South Otselic, NY (P monofil)

HERCULES INCORPORATED, HERCULES ENGINEERED & FABRICATED PRODUCTS COMPANY, FIBERS Oxford, GA *Herculon* (P yarn & staple)

THE HOOVEN & ALLISON COMPANY Xenia, OH (P film)

INTEGRATED PRODUCTS, INC. Rome, GA (P staple)

J & J INDUSTRIES Dalton, GA (P yarn)

JOHNSON FILAMENTS Williston, VT (P monofil)

KELLER INDUSTRIES, INC. Swainsboro, GA (P monofil - captive)

KIMBERLY-CLARK CORPORATION Corinth, MS, Balfour, NC, La Grange, GA & Neenah, WI *Accord, Duraguard, Evolution* (P spunbonded); *Cyclean, Evolution III* (P spunbonded/meltblown & laminate)

LAMBETH CORPORATION New Bedford, MA *Lambeth* (E & P monofil)

LAWRENCE HOSE COMPANY (A CONSOLIDATED FOODS COMPANY) Burlington, NC (E monofil - captive)

LORETEX, DIVISION OF OIVIND LORENTZEN, INC. Guilderland Center, NY (E film - captive)

MIRAFI INC (subsidiary of Dominion Textiles) Moultrie, GA (P film - captive)

NSI, INC. Soperton, GA (P film - captive)

THE OSTERNECK COMPANY Lumberton, NC (P film)

PHILLIPS FIBERS CORPORATION (subsidiary of Phillips 66 Company) Rocky Mount, NC, Seneca & Spartanburg, SC *Marvess* (P yarn, staple & tow)

POLYLOOM CORPORATION OF AMERICA Dayton, TN *Polyloom* (P film)

SARLON INDUSTRIES, INC. Miami, FL (P monofil & film)

SHUFORD MILLS, INC. Hickory, NC (P film)

SOLUTION FIBERS, INC. Lafayette, GA (P yarn)

SOUTHERN WEAVING, INC. Greenville, SC (P yarn)

UNITED STATES (continued)

STEVENS FIBER DIVISION, STEVENS LINEN ASSOC., INC. Dudley, MA (staple)

SUNBURST YARNS Alton, VA (P yarn)

SUNSHINE CORDAGE CORPORATION Miami, FL (E & P monofil)

SYNTHETIC INDUSTRIES Chickamauga & Dalton, GA (P film & staple - captive)

TECHNOTRADE Dalton, GA (P yarn)

TRUSTITE DIVISION OF FIBRES SOUTH, INC. Clearfield, UT *Trustite, Tyrite* (P film)

TUBBS CORDAGE COMPANY Orange, CA *Loktite* (P monofil & film)

TWINE PRODUCTS CORPORATION New Orleans, LA (P film)

UNITED STATES ROPE COMPANY Menlo Park, CA (P monofil)

WALL INDUSTRIES, INC. Granite Quarry, NC (E & P monofil)

WALTRICH PLASTIC CORPORATION Walthourville, GA (P monofil)

WAYN-TEX, INC. Waynesboro, VA *Beamette, Wayntuf* (E & P yarn & monofil & P film - captive)

WELLINGTON PURITAN MILLS (MONTAIR DIV.) Pilot Mountain, NC *Pur-Ty, Weltite* (P yarn & E & P monofil & film)

WELLINGTON SYNTHETIC FIBRES, INC. Leesville & Summerville, SC (P yarn & monofil)

TEXTILE PRODUCTS FROM OLEFIN

CALIFORNIA WEBBING (P yarn)

CONTINENTAL (P yarn)

CONWED CORP. Conwed Plastic Netting (P embossed film for netting)

DICEY (P yarn)

E.I. DU PONT DE NEMOURS & COMPANY (INC.) (E & P embossed film for netting)

HERCULES INCORPORATED, POLYMERS DIVISION *Delnet* (E embossed film for netting)

NALLE, INC. (P embossed film for netting)

RIEGEL PRODUCTS CORPORATION *Polyweb* (P meltblown)

THE 3M COMPANY (P spunbonded)

GLASS FIBER

CERTAINTEED CORPORATION, FIBER GLASS REINFORCEMENTS DIVISION Wichita Falls, TX *RO99, Satin Glass, Stichmat, Unifilo* (roving, woven roving, mat, chopped strand & combination product)

F.G.I. FIBERS, INC. Amsterdam, NY (roving & chopped)

GAF, BUILDING MATERIALS DIVISION Irwindale, CA (chopped), Nashville, TN (chopped)

UNITED STATES (continued)

GFT (GLASS FIBER TECHNOLOGY) Chester, SC (wet chopped for shingles)

LUNDY TECHNICAL CENTER Pompano Beach, FL *RoMHOglas* (metallized glass fiber roving, strand & mat)

MANVILLE CORPORATION Waterville, OH & Etowah, TN *Chop-Pak, Dura-Glass, Star Stran, Star Rov* (chopped strand, mat, sliver & roving)

NICOFIBERS INC. Shawnee, OH *Conformat, Consurmat, Surmat* (mat)

OMNI FIBER GLASS CORPORATION - DIVISION OF KOPPERS COMPANY Chino, CA (roving, chopped & milled)

OWENS-CORNING FIBERGLAS CORPORATION Huntingdon, PA, Aiken & Anderson, SC, Jackson, TN & Amarillo, TX *Aralon, Beta, Bi-Ply, Fiberglas, S-Glass, S-2 Glass* (yarn, roving, woven roving, mat, chopped & milled)

PPG INDUSTRIES, INC., FIBER GLASS Lexington & Shelby, NC *Azdel* (yarn, roving, mat, chopped strand, woven roving & rubber reinforcement)

SUPERIOR GLASS FIBERS, INC. Bremen, OH (mat)

URUGUAY

HILADOS SINTETICOS S.A. (HISISA)
Nylon 66 — Estacion Manga, Montevideo *Hisilon* (yarn)

POLIMEROS URUGUAYOS S.A.
Polyester — San José, San José (staple)

SINTETICOS SLOWAK S.A.
Nylon 6 — Montevideo *Crofil* (yarn & monofil)
Nylon 66 — Montevideo *Hisilon* (yarn)
Polyester — Montevideo *Terpol* (yarn)

SUDAMTEX del URUGUAY S.A.
Acetate — Colonia (yarn)

OLEFIN FIBER

ARYN S.A. Montevideo (E monofil)

CINCA S.A. Montevideo (E film)

ELABORADORA DE ARPILLERA SINTETICA S.A. (E film)

UDINE S.A. (E monofil)

VENEZUELA

C.A. INVERSIONES ARAGUA
Nylon 6 — Maracay *Sudalon* (yarn)

GOMELAST, C.A.
Spandex — Caracas *Spandaven* (yarn)

HILADOS FLEXILON
Nylon 6 — Caracas (yarn)
Polyester — Caracas (yarn)

MANTEX, C.A.
Acetate — Valencia (yarn)
Polyester — Maracay, Valencia *Fortrel* (yarn & staple)

SUDAMTEX DE VENZUELA, C.A.
Polyester — Maracay (yarn & staple)

YUGOSLAVIA

HEMTEKS
Polyester — Skopje, Macedonia *Maklen* (yarn & staple)

INCEL FABRIKA CELULOZE I VISKOZE
Polyester — Banja Luka, Bosna i Hercegovina *Belira* (yarn)
Rayon — Banja Luka (staple)

INDUSTRIJA SINTETICKIK VLAKANA (PROGRES)
Nylon 6 — Prizren, Kosovo Mitohijan *Supralon* (yarn)
Polyester — Istok, Kosovo Mitohijan & Prizren *Prizrenit* (yarn)

KEMICNA TOVARNA MOSTE
Nylon 6 — Ljubljana, Slovenia *Yulon* (yarn)

ORGANSKO HEMIJSKA INDUSTRIJA SKOPJE (OHIS)
Acrylic — Skopje, Macedonia *Makrolan, Malon* (staple)

TEKSTILNA INDUSTRIYA "ZELE VELJKOVIC"
Nylon 6 — Leskovac" (yarn & staple)

VARAZDINSKI TEKSTILNI KOMBINAT (VARTEKS)
Polyester — Varazdin (staple)

VISKOZA
Rayon — Loznica, Serbia (ind & reg yarn & staple)

OLEFIN FIBER

HEMIJASKA INDUSTRIJA U OSNIVANJU Belgrade (P staple)

GLASS FIBER

GOSTIVAR STAKLARA Staklara (roving & mat)

WORLD MAN-MADE FIBER PRODUCER AFFILIATIONS & PERCENTAGE OF CAPITAL OWNERSHIP

Licensing and royalty agreements are not taken into account. The ownership of companies, other than man-made fiber producers, is not listed; e.g., weaving mills, chemical producers, etc.

For each country, the percentage following the first-named producer is the portion owned by the captioned company; the remainder of the entry shows other ownership. For example, Akzo N.V. owns 40% of Fibras Quimicas and Alfa-Group owns 60%.

AKZO N.V. (NETHERLANDS)

Brazil	Companhia Bahiana de Fibras 45%; others 55%; Polyenka 51%; others 49%
Colombia	Enka de Colombia 48%; others 52%
Ecuador	Enkador 48%; others 52%
Germany	Enka 97%; public 3%
India	Century Enka 39%; others 61%
Mexico	Fibras Quimicas 40%; Alfa-Group 60%
Netherlands	Enka 100% Silenka 33.33%; PPG Industries 33.33%; others 33.33%
Spain	La Seda 57%; others 43%

AMERICAN CYANAMID COMPANY (U.S.A.)

U.S.A.	Fibers Division 100%

AMOCO CHEMICALS CORPORATION (U.S.A.)

Australia	Amoco Fabrics & Fibers Co. 100%
Canada	Amoco Fabrics & Fibers Co. 100%
Germany, F.R.	Amoco Fabrics & Fibers Co. 100%
U.K.	Amoco Fabrics & Fibers Co. 100%
U.S.A.	Amoco Fabrics & Fibers Co. 100%

ASAHI CHEMICAL INDUSTRY CO. LTD. (JAPAN)

India	Baroda Rayon Corp. 1%; local interests 89%; others 10%
Indonesia	P.T. Indonesia Asahi Chemical 51%; others 19%; local interests 30%
Ireland	Asahi Synthestic Fibres (Ireland) 85%; others 15%
Japan	Asahi Chemical 100%
Korea, Rep.	Tong Yang Polyester 50%; Tong Yang Nylon 50%

BASF AMERICA CORPORATION (U.S.A.)

BASF America owns 100% of BASF Corporation Fibers Division (U.S.A.), which in turn owns 100% of BASF Fibers Inc.

BAYER A.G. (WEST GERMANY)

Belgium	Bayer Antwerpen N.V. 100%
Germany, F.R.	Bayer A.G. 100% Faserwerke Lingen G.m.b.H. 100%
Iran	Sherkat Sahami Aliaf 50%
Peru	Bayor Industrial S.A. 60%

CELANESE CORPORATION (U.S.A.)

Belgium	Celanese S.A. 100%
Brazil	Celanese do Brasil S.A. 100%
Canada	Celanese Canada Inc. 56%; public 44%
Mexico	Celanese Mexicana 40%; public 60%
U.S.A.	Celanese Fibers 56%; public 44%

COURTAULDS, PLC (U.K.)

Canada	Courtaulds (Canada) Inc. 100%
France	Courtaulds S.A. 100%
Italy	Novaceta S.p.A. 50%; SNIA 50%
	Courtaulds Fibres S.A. 84%; others 16%
Spain	INACSA 12%; public 88%
U.K.	Courtaulds Fibres Ltd. 100%
U.S.A.	Courtaulds North America Inc. 100%

E. I. DU PONT DE NEMOURS & COMPANY (U.S.A.)

Argentina	Ducilo 82%; Bunge & Born 18%
Brazil	Du Pont do Brasil 100%
Canada	Du Pont Canada 75%; public 25%
Germany, F.R.	Du Pont de Nemours (Deutschland) 100%
Japan	Toyo Products 50%; Toray Industries 50%
Luxembourg	Du Pont Fibres 100%
Mexico	Nylon de Mexico 40%; Alfa-Group 51%; public 9%
Netherlands	Du Pont de Nemours (Nederland) 100%
U.K.	Du Pont (U.K.) 100%
U.S.A.	Textile Fibers Department 100%
	Polymer Products Department 100%

FIRESTONE TIRE & RUBBER COMPANY (U.S.A.)

Canada	Firestone Textiles Co. 100%
U.S.A.	Firestone Fibers & Textiles 100%

HARBOUR GROUP LTD. (U.S.A.)

U.K.	Synthetic Industries (Ireland) PLC 100%
U.S.A.	Fibron Corp. of Tennessee 100%
	Synthetic Industries, Inc. 100%
	Synthetic Industries (Texas), Inc. 100%

HERCULES INCORPORATED (U.S.A.)

Italy	HIMONT Fibers 50%; Montedison 50%
U.S.A.	Hercules 100%

HOECHST A.G. (WEST GERMANY)

Austria	Austria Faserwerke; Hoechst Austria 51%; Lenzing 49%
Brazil	Cia. Brasileira de Sintéticos 100%
Germany, F.R.	Hoechst 100% Zehlendorf 91%; others 9%
South Africa	Hoechst South Africa 100%
U.K.	Hoechst Fibre Industries 100%
U.S.A.	American Hoechst 100%

IMPERIAL CHEMICAL INDUSTRIES LIMITED (U.K.)

ICI owns 62% of ICI Australia Ltd., which in turn owns Fibremakers Ltd. of Australia

Germany, F.R.	ICI Europa Fibres G.m.b.H. 100%
India	Chemicals & Fibres of India Ltd. 55%
Pakistan	ICI Pakistan Manufacturers 70%
Portugal	Finicisa-Fibras 50%; Francisco Fino Ltd. 50%
South Africa	S.A. Nylon Spinners (through AECI Ltd.) 40%
Spain	Nurel S.A. 50%; local interests 50%
U.K.	ICI Fibres 100%

KURARAY CO., LTD. (JAPAN)

Indonesia	Kuma Fiber 40%; Marubeni 30%; local interests 30%
Japan	Kuraray 100%

MITSUBISHI RAYON (JAPAN)

Japan	Mitsubishi Acetate 100% Mitsubishi Rayon 100%
Portugal	FISIPE 4%; Mitsubishi Corp. 9%; Quimigal 87%
Taiwan	Tong Hwa 19%; Mitsubishi Corp. 12%; others 69%

MONTEFIBRE S.p.A. (ITALY)

Italy	Società Italiana Poliestere S.p.A. 100%; Società Italiana Prodotti Acrilici S.p.A. 100%, Industrie Tessili Vercelli S.p.A. 100%, Società Industriale Cremonese S.p.A. 50%; others 50%
Spain	Montefibre Hispania S.A. 87%; others 13%

OWENS-CORNING FIBERGLAS CORPORATION (U.S.A.)

Belgium	Owens-Corning Fiberglas Europe 100%
Brazil	OCFIBRAS 100%
Canada	Fiberglas Canada 49%; Duplate Canada 49%; local interests 2%
France	Owens-Corning Fiberglas Europe 100%
Japan	Asahi Fiber Glass 28%; Asahi Glass Co., Ltd. 72%
Mexico	Vitro-Fibras 40%; Vitro Group 60%
Norway	Owens-Corning Fiberglas Europe 70%; Elkem-Spigerverket 30%
Spain	Owens-Corning Fiberglas Europe 100%
Sweden	Owens-Corning Fiberglas Europe 100%
U.S.A.	Owens-Corning Fiberglas 100%

PPG INDUSTRIES (U.S.A.)

Netherlands	Silenka 33.33%; Akzo N.V. 33.33%; NOM 33.33%
U.S.A.	Fiber Glass Products 100%

PILKINGTON BROTHERS (U.K.)

Argentina	VASA 99.7%; Glaverbel/Boussois/local interests 0.3%
India	Fibreglass Pilkington 50%, plus 1 share; Indian interests 50%, less 1 share
South Africa	Fibreglass South Africa 24.5%; Owens-Corning Fiberglas (U.S.A.) 24.5%; Plate Glass & Shatterprufe Industries Ltd. 51%
U.K.	Fibreglass PLC 100%

RHÔNE-POULENC S.A. (FRANCE)

Argentina	Rhodia Argentina Química e Têxteis 100%
Brazil	Rhodia S.A. 100%; Rhodia Nordeste 99%
France	Rhône-Poulenc-Textile 99.9%; Rhône-Poulenc Fibres 100%; Cellatex 100%; Rhovyl 100%
Germany, F.R.	Rhodia A.G. 100%
Spain	SAFA 60%
Switzerland	Viscosuisse (through Holva AG) 87%

SAINT-GOBAIN (FRANCE)

France	Saint-Gobain Industries 100%
Germany, F.R.	Gevetex-Textilglas 100%
Italy	Vetrotex Italia 100%
Spain	Cristaleria Espanola S.A. 69%
U.S.A.	CertainTeed Corp. 55%; others 45%

SNIA FIBRE (ITALY)

France	Ets. Nysam 100%
Italy	Novaceta 50%; Courtaulds (U.K.) 50%

TEIJIN LTD. (JAPAN)

Indonesia	P.T. Tifico 65.8%; Toyo Menka 16.5%; local interests 17.7%
Japan	Teijin 100% Teijin Acetate 100%
Korea, Rep.	Sunkyung Fibres 5.5%; local interests 94.5%
Thailand	Teijin Polyester 45%; local interests 55%

TORAY INDUSTRIES, INC. (JAPAN)

Indonesia	P.T. Indonesia Toray Synthetics 59%; others 41%
Japan	Toray Industries 100%; Toray-Monofilament 100%; Toray-DuPont 50%, DuPont 50%
Korea, Rep.	Cheil Synthetic Textiles 22.8%; others 77.2% Kolon Industries 19.3%; others 80.7%
Malaysia	Penfibre SDN. Berhad 100%
Thailand	Toray Nylon Thai 30%; others 70%

TUBBS CORDAGE COMPANY (U.S.A.)

Philippines	Manila Cordage 40%
U.S.A.	Tubbs Cordage 100%

WELLMAN, INC. (U.S.A.)

Ireland	Wellman International Ltd. 45%; Irish Nationals 55%
U.S.A.	Man-Made Fiber Division 100%

OLEFIN DATA PRESENTATION

As has been the practice with past June issues, all world olefin data are presented separately from the other noncellulosic fibers. This method of presentation is necessitated by a lack of complete olefin data worldwide.

Two examples illustrate the problem:

A. Though the U.S. olefin production data published regularly in the ***Organon*** include yarn, monofil, staple, film fiber and spunbonded polypropylene, published Italian and Japanese olefin data show the production of yarn+monofilaments and staple+tow but no data on production of film fiber, such as is used in sacks, fishing nets and carpet backing.

B. The published man-made fiber data of many other countries show little or no olefin fiber production at all (e.g., France, West Germany and the United Kingdom).

Due to the difficulties given above, the noncellulosic data, except olefin, are presented on pages 104-107.

The olefin data for most countries appear on page 115. These data consist of (a) the "official" country data published by a government, an association or other statistical agency, and (b) an estimate of the olefin fiber, mainly slit and split film fiber, believed to have been produced in the country. No attempt is made to strike a world total because the incomplete data of a number of countries, particularly in Latin America, Eastern Europe and Africa, Asia and Oceania, prohibit such a tabulation.

TABLE 10: NUMBER OF MAN-MADE FIBER PRODUCING PLANTS (EXCEPT OLEFIN)*

COUNTRY & REGION	CELL.		NONCELLULOSIC					TEX-TILE GLASS	GRAND TOTAL
	ACE-TATE[a]	RAYON	ACRY-LIC[b]	NY-LON[c]	POLY-ESTER	OTH-ER[d]	TOTAL		
WEST EUROPE									
AUSTRIA		2			1	1	2		4
BELGIUM/LUX.	1	1		3	1		4	2	8
FINLAND		1		1			1	1	3
FRANCE		3	3	10	3	2	18	3	24
WEST GERMANY	1	4	3	13	11	4	31	3	39
GREECE		1	1	2	3		6		7
IRELAND (EIRE)			2	3	2		7		7
ITALY/MALTA	4	5	9	26	13	2	50	5	64
NETHERLANDS		1		2	1	1	4	1	6
NORWAY								1	1
PORTUGAL		2	1	2	2		5	1	8
SPAIN	2	2	4	11	7		22	2	28
SWEDEN		1		1			1	1	3
SWITZERLAND				6	3		9		9
TURKEY		1	3	4	9		16	1	18
UNITED KINGDOM	4	1	4	7	10	9	30	8	43
TOTAL W. EUROPE	**12**	**25**	**30**	**91**	**66**	**19**	**206**	**29**	**272**
EAST EUROPE									
BULGARIA		1	1	1	1		3		4
CZECHOSLOVAKIA		8		6	3		9	4	21
GERMAN D.R.		9	4	4	3	1	12	1	22
HUNGARY		1	1	1			2		3
POLAND		6	1	1	3	2	7	2	15
ROMANIA		5	1	1	2		4		9
YUGOSLAVIA		3	2	5	8		15	1	19
TOTAL E. EUROPE		**33**	**10**	**19**	**20**	**3**	**52**	**8**	**93**
AMERICAS									
ARGENTINA	1	1	1	7	5	1	14	1	17
BOLIVIA					1		1		1
BRAZIL	2	5	4	30	17	2	53	2	62
CANADA	1	1		3	2	1	6	1	9
CHILE		2		4	4		8		10
COLOMBIA	2			6	7		13		15
COSTA RICA					1		1		1
CUBA		1							1
ECUADOR					5		5		5
GUATEMALA				1			1		1
MEXICO	2	2	7	10	10	2	29	1	34
PERU	1		1	6	4		11		12
U.S.A.	5	4	5	31	32	7	75	18	102
URUGUAY	1			4	2		6		7
VENEZUELA	1			2	4	1	7		8
TOTAL AMERICAS	**16**	**16**	**18**	**104**	**94**	**14**	**230**	**23**	**285**
AFRICA, ASIA & OCEANIA									
AUSTRALIA				2	2	1	5	1	6
BANGLADESH		2		1			1		3
EGYPT		2		1	2		3		5
INDIA	2	24	5	24	27		56	4	86
INDONESIA		9		7	23		30		39
IRAN			1	2	1		4		4
IRAQ		1							1
ISRAEL			1	1			2		2
JAPAN	2	16	7	14	22	17	60	14	92
KENYA				1	4		5		5
KOREA, REP. OF	1	1	2	7	11	1	21		23
MALAYSIA			2		1		3		3
NIGERIA					1		1		1
PAKISTAN	1			3	12		15		16
PHILIPPINES				3	3		6		6
SOUTH AFRICA				1	4		5		5
SRI LANKA				1			1		1
TAIWAN		2	3	16	18		37		39
TANZANIA					1		1		1
THAILAND		1		4	6		10		11
TOTAL A,A & O	**6**	**58**	**21**	**88**	**138**	**19**	**266**	**19**	**349**
WORLD TOTAL*	**34**	**132**	**79**	**302**	**318**	**55**	**754**	**75**	**989**

* Data for People's Republic of China, North Korea & U.S.S.R. are not included here.

a. Acetate includes triacetate.

b. Acrylic includes modacrylic.

c. Nylon includes aramid.

d. Includes 1 azlon, 5 biconstituent, 2 fluorocarbon, 1 PBI, 1 polycarbonate, 1 polychlal, 2 polyesteramide, 1 polyvinyl fluoride, 1 promix, 8 saran, 22 spandex or elastomer, 4 vinal and 6 vinyon plants, for a total of 55 plants producing these miscellaneous fibers.

TRADE BAROMETER

MAN-MADE FIBER TRADE BALANCE DROPS

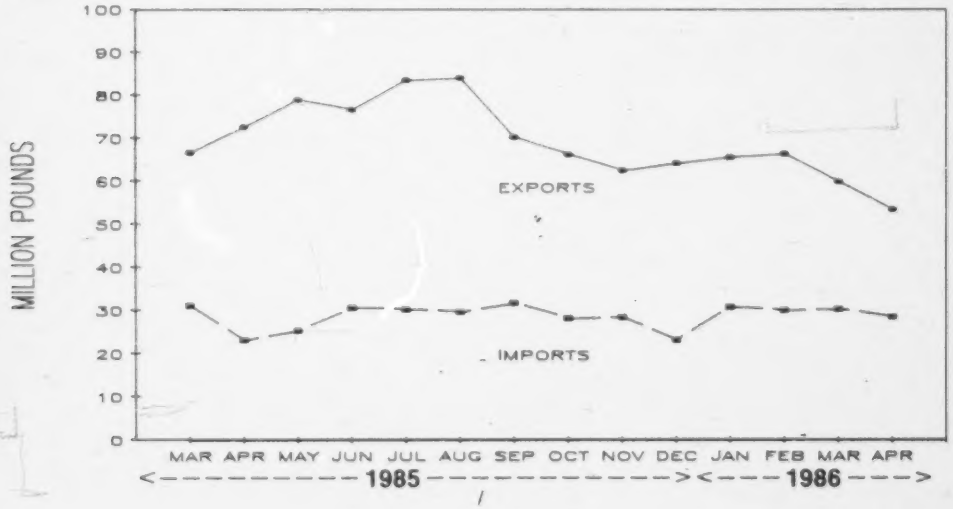
The U.S. man-made fiber balance of trade fell in April as the net-export balance of trade declined to 24.9 million pounds, down almost 16% from the 29.6 million pound export balance in March. Declining exports and imports of man-made fiber resulted in the decline of the trade balance. Imports of fiber amounted to 28.5 million pounds, down 6% from the 30.3 million pounds imported in March. Exports of fiber in April totaled 53.4 million pounds, a decline of almost 11% from the 59.9 million pounds exported in March.

The April trade balance is almost 50% below that of April 1985. This month's imports are 23.4% above the level of last April, while exports are down 26.4% during the same period.

NOTE ABOUT MANUFACTURES TRADE DETAIL

Due to substantial revisions and additions to the U.S. Census TSUSA commodity number system, there will not be a listing of trade data for manufactures this month. As soon as changes are implemented, the manufactures trade data will again appear in the ORGANON.

GRAPH 1:
IMPORTS VS EXPORTS OF MAN—MADE FIBER



GRAPH 2:
MAN—MADE FIBER MONTHLY TRADE BALANCE

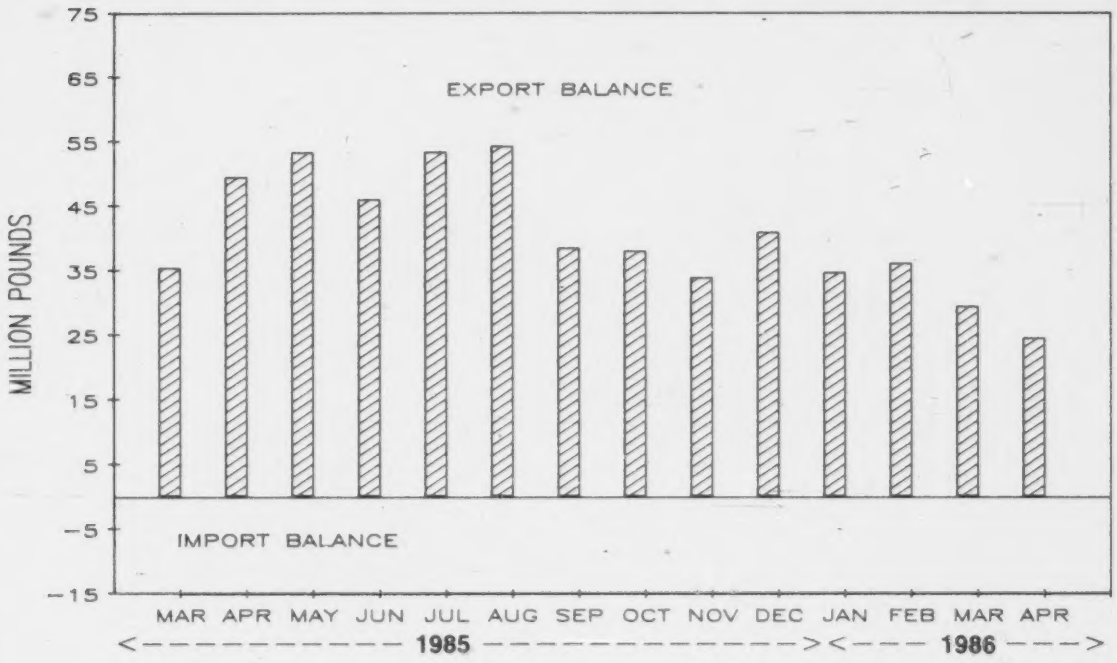


TABLE 11:
MAN-MADE FIBER MONTHLY TRADE BALANCE DETAIL
MILLION POUNDS

COMMODITY	1985										1986			
	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR
CELLULOSIC YARN+MONOFILAMENTS	0.3 E	+	0.1 I	0.8 I	+	0.4 I	1.1 I	0.8 I	0.1 I	0.3 I	0.9 I	0.8 I	0.7 I	0.9 I
CELLULOSIC STAPLE+TOW	2.2 E	3.7 E	1.5 E	4.4 E	0.9 E	4.3 E	1.1 E	2.4 E	1.7 E	3.0 E	0.8 E	1.5 E	4.0 E	0.4 I
NONCELLULOSIC YARN+MONOFILAMENTS	10.2 E	18.9 E	20.9 E	22.4 E	21.0 E	23.2 E	19.3 E	18.1 E	20.3 E	20.5 E	20.5 E	15.3 E	14.4 E	13.6 E
NONCELLULOSIC STAPLE+TOW	23.4 E	24.8 E	29.0 E	17.2 E	28.0 E	22.5 E	16.3 E	14.1 E	5.5 E	14.6 E	9.1 E	12.1 E	5.6 E	4.0 E
CELLULOSIC WASTE	0.2 E	0.1 E	0.1 E	0.1 E	+	+	0.1 E	+	+	+	0.1 E	0.2 E	0.2 E	0.3 E
NONCELLULOSIC WASTE	0.7 I	2.2 E	2.1 E	2.9 E	3.7 E	4.9 E	3.0 E	4.4 E	6.7 E	5.3 E	5.2 E	8.0 E	6.1 E	8.3 E
TOTAL	**35.6 E**	**49.7 E**	**53.5 E**	**46.2 E**	**53.6 E**	**54.5 E**	**38.7 E**	**38.2 E**	**34.1 E**	**41.1 E**	**34.8 E**	**36.3 E**	**29.6 E**	**24.9 E**

I means net-import balance.
E means net-export balance.

TABLE 12:
SELECTED U.S. MAN-MADE FIBER IMPORTS FOR CONSUMPTION BY COUNTRY OF ORIGIN

THOUSAND POUNDS

ITEM & COUNTRY	1986 JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YEAR TO DATE 1986	1985
NONCELLULOSIC YARN, MONOFIL & STRIPS														
BRAZIL	82	56	0	53									191	260
CANADA	200	420	226	302									1148	576
GERMANY, FED. REP. OF	482	284	783	594									2143	1637
JAPAN	95	41	50	25									211	245
MEXICO	81	114	0	62									257	247
NETHERLANDS	195	181	167	233									776	382
REP. OF KOREA	80	60	80	80									300	22
ALL OTHER COUNTRIES[a]	160	146	136	265									707	131
TOTAL CELL. YARN	**1375**	**1302**	**1442**	**1614**									**5733**	**3500**
CELLULOSIC STAPLE+TOW														
AUSTRIA	259	0	0	126									385	189
CANADA	777	981	724	948									3430	2559
JAPAN	143	75	128	108									454	203
MEXICO	310	0	109	123									542	0
UNITED KINGDOM	105	39	80	69									293	663
ALL OTHER COUNTRIES[b]	11	0	485	10									506	1806
TOTAL CELL. STAPLE+TOW	**1605**	**1095**	**1526**	**1384**									**5810**	**5420**
NONCELLULOSIC YARN, MONOFIL & STRIPS														
AUSTRALIA	0	16	31	2									49	30
AUSTRIA	113	7	115	4									239	407
BELGIUM	1152	1901	531	297									3881	2127
BRAZIL	1	56	0	0									57	117
CANADA	1282	338	857	1384									3861	3702
COSTA RICA	480	430	349	608									1867	30
FRANCE	405	689	679	249									2022	1757
GERMANY, FED. REP. OF	1195	1199	1397	774									4565	7370
ISRAEL	413	277	316	226									1232	632
ITALY	790	529	1158	895									3372	3622
JAPAN	646	553	1019	693									2911	2725
MEXICO	128	917	1223	931									3199	2701
NETHERLANDS	74	213	29	6									322	185
SOUTH AFRICA	853	866	532	631									2882	3099
SWITZERLAND	74	74	1	2									151	107
TAIWAN	36	39	47	144									266	50
UNITED KINGDOM	573	510	352	307									1742	2585
YUGOSLAVIA	85	0	0	0									85	914
ALL OTHER COUNTRIES[c]	47	218	192	215									672	501
TOTAL N.C. YARN	**8347**	**8832**	**8828**	**7368**									**33375**	**32661**
NONCELLULOSIC STAPLE+TOW														
BELGIUM	25	18	57	39									139	291
BRAZIL	35	60	22	0									117	1628
CANADA	2650	1831	1430	1882									7793	7376
COSTA RICA	31	44	0	0									75	863
FRANCE	996	984	984	761									3725	3496
GERMANY, FED. REP. OF	3105	2727	2552	2994									11378	6752
ISRAEL	42	81	48	80									251	133
ITALY	1237	1748	1504	1525									6014	3867
JAPAN	1919	1523	2265	1431									7138	5950
MEXICO	1025	1105	1011	1249									4390	2661
NETHERLANDS	20	0	+	43									63	197
REP. OF KOREA	492	355	551	88									1486	1300
ROMANIA	210	88	158	0									456	302
SOUTH AFRICA	80	88	0	25									193	205
SWITZERLAND	137	0	23	48									208	246
TAIWAN	2105	1587	2111	1961									7764	5314
UNITED KINGDOM	1819	2340	2151	2271									8581	3753
ALL OTHER COUNTRIES[d]	116	330	216	222									884	378
TOTAL N.C. STAPLE+TOW	**16044**	**14909**	**15083**	**14619**									**60655**	**44712**

+ Means a nominal poundage.

Other countries supplying 1986 poundages are:

a. Australia 18, Austria 30, Belgium 238, China, PRC 2, France 47, Ireland 175, Israel 28, Italy 5, Taiwan 25, Thailand 17, United Kingdom 72, Yugoslavia 50

b. Australia 217, Germany, Federal Rep. of 4, Hong Kong 6, Sweden 278, Taiwan 1.

c. Chile 44, Denmark 31, Greece +,Hong Keng +, Hungary 48, India +, Ireland 88, Korea, Rep. of 116, Romania 135, Singapore 31, Somalia 36, Spain +, Sweden 143.

d. Australia 94, Austria 58, China, PRC 117, Denmark 59, Greece 12, Hong Kong 11, Ireland 82, Kenya 31, Malaysia 96, Philippines 1, Sweden 57, Switzerland +, Thailand 138, Turkey 51, Yugoslavia 77.

TABLE 13:
U.S. MAN-MADE FIBER IMPORTS FOR CONSUMPTION

THOUSAND POUNDS

ITEM	COMMODITY NUMBER AS OF 1/1/78	1986 JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR TO DATE 1986	1985
CELLULOSIC FIBERS															
YARN - SINGLES															
TEXTURED	310.0106 & .0206	28	30	29	0									87	79
OTHER	310.0130 & .0230*	1309	1180	1318	1488									5295	3279
MONOFILAMENTS	309.0310 & .0610	0	5	6	0									11	18
STRIPS, $1/LB & UNDER	309.2000*	38	87	89	126									340	124
SUBTOTAL ABOVE		**1375**	**1302**	**1442**	**1614**									**5733**	**3500**
STAPLE	309.4320 & .4325	1465	1056	1396	1298									5215	5015
GROUPED FILAMENTS	309.3010 & .3310	140	39	130	86									395	405
SUBTOTAL ABOVE		**1605**	**1095**	**1526**	**1384**									**5610**	**5420**
WASTE, ADVANCED & NOT ADVANCED	309.6615 & .7510	+	0	+	33									**33**	**210**
NONCELLULOSIC FIBERS															
YARN - SINGLES															
TEXTURED - NYLON															
LESS THAN 450	310.0107 & .0207	150	195	203	139									687	7927
MORE THAN 450	310.0108 & .0208	1809	1217	1092	918									5036	
- POLYESTER	310.0110 & .0210	748	1376	1165	1209									4498	5435
- OTHER	310.0114 & .0214	1640	2607	1276	1088									6611	4292
OTHER - NYLON	310.0149 & .0249	1236	1498	1935	1321									5990	7438
- POLYESTER	310.0150 & .0250	1898	1331	2390	1911									7530	5683
- OTHER	310.0170 & .0270[b]	483	225	438	400									1546	744
MONOFILAMENTS	309.0200 & .0330[c]	275	256	267	218									1016	801
STRIPS, OVER $1/LB	309.2100 & .2500*	108	127	62	164									461	341
SUBTOTAL ABOVE		**8347**	**8832**	**8828**	**7368**									**33375**	**32661**
STAPLE - NYLON	309.4338	3716	4331	3835	4107									15989	10937
- POLYESTER	309.4342	2725	3058	3474	2831									12088	8046
- ACRYLIC	309.4345	1473	822	887	1202									4384	4521
- OLEFIN	309.4346	623	222	149	28									1022	832
- OTHER	309.4355	2666	1949	1613	1881									8109	7374
GROUPED FILAMENTS															
NYLON	309.3030 & .3200	3381	3504	3164	3153									13202	8757
POLYESTER	309.3040 & .3340	147	150	204	84									585	1165
ACRYLIC	309.3050 & .3350	972	670	1616	1048									4306	2461
OTHER	309.3065 & .3365	341	203	141	285									970	619
SUBTOTAL ABOVE		**16044**	**14909**	**15083**	**14619**									**60655**	**44712**
WASTE, NOT ADVANCED															
- NYLON	309.6625	1605	2239	2315	1439									7598	12939
- POLYESTER	309.6630	560	403	465	827									2255	3216
- ACRYLIC	309.6645	0	0	6	0									6	30
- OTHER	309.6660	892	813	256	748									2709	415
NOILS & GARNETTED FIBERS	309.6000 & .7000*	+	59	0	0									59	93
OTHER WASTE, ADVANCED	309.7525 - .7555	324	357	372	456									1509	1244
SUBTOTAL ABOVE		**3381**	**3871**	**3414**	**3470**									**14136**	**17937**
TOTAL MAN-MADE ABOVE		**30752**	**30009**	**30293**	**28488**									**119542**	**104440**
OTHER MAN-MADE FIBER TOPS, YARN & THREAD															
YARN - PLIED															
TEXTURED - CELLULOSIC	310.1106	0	30	0	0									30	1
- NONCELLULOSIC	310.1015[e] & .1109*	1309	1305	586	1260									4460	2759
OTHER - CELLULOSIC	310.1030 & .1135[f]	2	11	+	+									13	89
- NONCELLULOSIC	310.1050 & .1070[g]	33	59	49	63									204	1578
SPUN YARN - CELLULOSIC	310.4005 & .4030[h]	227	105	155	182									669	455
- OTHER	310.4015 & .4027[i]	2619	3160	3542	3597									12918	9825
OTHER YARNS - NES, INCL. CHENILLE	310.6029 - .8000	225	385	830	1278									2718	1854
HANDWORK YARNS & SEWING THREAD	310.9000 - .9140[j]	284	491	478	387									1640	2485
SLIVER, TOPS & ROVING	309.9000	282	239	493	226									1240	987
TEXTILE GLASS FIBER	309.2800 & .2900*	2142	3090	2643	2221									10096	10953
GRAND TOTAL ABOVE		**37875**	**38884**	**39069**	**37702**									**153530**	**135426**

SOURCE: U.S.Census Bureau Report IM145X.

NES - Not elsewhere specified.

\+ Means a nominal poundage.

* These items are not reported by the Census as cellulosic vs. noncellulosic. Any separation between cellulosic and noncellulosic is estimated, based mainly on average declared value.

a. Also includes 310.0510 & .0610.

b. Also includes 310.0530, .0550, .0630 & .0650.

c. Also includes 309.0340, .0365, .0500, .0630, .0640 & .0665.

d. There may be some acetate yarn in these data, but the Census figures do not permit a segregation.

e. Also includes 310.1110 & .1114.

f. Also includes 310.2010 & .2110.

g. Also includes 310.1150, .1155, .1170, .2030, .2050, .2130 & .2150.

h. Also includes 310.5030.

i. Also includes 310.4046, .4047, .4050, .5015, .5046, .5047, .5049 & .5051.

j. Also includes 310.9300 & .9500.

k. Chiefly roving. Also includes 309.9800, & .9900.

TABLE 14:
U.S. EXPORTS OF MAN-MADE FIBERS

THOUSAND POUNDS

ITEM	COMMODITY NUMBER AS OF 1/1/78	1986 JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR-TO-DATE 1986	1985
CELLULOSIC FIBERS															
FILAMENT YARN[a]															
TEXTURED	310.0006	0	3	5	22									30	38
OTHER[b]	310.0026	483	499	712	729									2423	2664
MONOFILAMENTS	309.0110	18	3	22	8									51	60
STRIPS	309.2210	0	0	1	1									2	7
SUBTOTAL ABOVE		**501**	**505**	**740**	**760**									**2506**	**2769**
STAPLE+TOW-RAYON	309.4222	2262	2482	5331	790									10865	13212
STAPLE-ACETATE	309.4219	175	102	162	223									662	418
SUBTOTAL ABOVE		**2437**	**2584**	**5493**	**1013**									**11527**	**13630**
WASTE, ADVANCED & NOT ADVANCED	309.7400	**68**	**233**	**157**	**303**									**761**	**485**
NONCELLULOSIC FIBERS															
YARN - SINGLES															
NYLON - TEXTURED	310.0008 & .0009	1373	2025	2135	1843									7376	9481
- HIGH TENACITY[c]	310.0027	5757	6837	5805	5895									24294	22747
- OTHER	310.0029	638	1276	1238	867									4019	3863
POLYESTER-TEXTURED	310.0010	7485	8451	9794	5928									31658	32717
- HIGH TENACITY[c]	310.0032	1952	1435	1252	2765									7404	3247
- OTHER[d]	310.0034	735	128	90	189									1142	3277
OTHER - TEXTURED	310.0014	8990	916	1023	1116									12045	2262
- OLEFIN	309.0040	67	951	84	119									1221	136
- OTHER	310.0044	212	600	479	524									1815	2447
MONOFILAMENTS, ALL DENIERS															
NYLON	309.0120	376	287	312	533									1508	751
POLYESTER[e]	309.0140	663	503	340	535									2041	2043
OTHER	309.0170	283	450	537	418									1688	4299
STRIPS	309.2220 & .2270	320	283	194	221									1018	1428
SUBTOTAL ABOVE		**28851**	**24142**	**23283**	**20953**									**87229**	**88498**
STAPLE - NYLON	309.4240	1111	1230	1074	1054									4469	3703
- POLYESTER	309.4242	8164	8395	6714	6651									29924	68220
- ACRYLIC	309.4245	8607	7909	4248	4524									25288	57113
- OLEFIN	309.4246	1844	1327	1269	1105									5545	2362
- OTHER	309.4247	1124	2228	1796	1208									6356	3295
GROUPED FILAMENTS															
NYLON	309.3220	238	350	176	336									1100	499
POLYESTER[e]	309.3240	1997	2797	1950	1832									8576	9364
ACRYLIC	309.3250 & .3255	2090	2775	3435	1893									10193	10163
SUBTOTAL ABOVE		**25175**	**27011**	**20862**	**18603**									**91451**	**154719**
WASTE, ADVANCED & NOT ADVANCED															
- NYLON	309.7620	299	806	408	628									2141	1033
- POLYESTER	309.7630	3848	5678	4934	7109									21569	11727
- ACRYLIC	309.7640	569	624	1080	228									2501	1460
- OTHER	309.7660	3831	4801	3139	3779									15550	3423
SUBTOTAL ABOVE		**8547**	**11909**	**9561**	**11744**									**41761**	**17643**
TOTAL MAN-MADE FIBER ABOVE		**65579**	**66384**	**59896**	**53376**									**245235**	**277724**
TEXTILE GLASS FIBER	309.2700 & .9700	4355	4551	5042	4580									18528	23514
GRAND TOTAL ABOVE		**69934**	**70935**	**64938**	**57956**									**263763**	**301238**

SOURCE: U.S. Census Bureau Report EM522

a. Includes thrown, singles and plied yarn.
b. Includes an undetermined amount of rayon tire cord and cord fabric.
c. Includes an undetermined amount of noncellulosic tire cord and cord fabric.
d. Includes zero twist yarns.
e. These data are obviously incorrect because of misclassification. Most of these poundages should be included with filament yarn.

TABLE 15:
SELECTED U.S. MONTHLY TEXTILE FIBER DATA

MILLION POUNDS

ITEM	1986 JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR TO DATE[a] 1986	1985
					TOTAL SHIPMENTS[b]									
MAN-MADE FIBER DATA[c]														
YARN+MONOFILAMENTS[d]														
CELLULOSIC YARN	**17.8**	**17.2**	**18.3**	**19.4**	**18.9**								**91.6**	**89.3**
NYLON[e] - INDUSTRIAL[f]	26.3	29.5	28.8	29.1	27.6								141.3	152.5
- CARPET	69.6	71.1	71.1	75.7	71.2								358.7	310.4
- TEXTILE[k]	30.9	31.1	31.7	32.1	30.6								156.4	153.0
POLYESTER - INDUSTRIAL[f]	26.2	25.6	27.9	26.7	24.4								132.8	128.0
- LOW DENIER INDUSTRIAL[g]	1.9	2.3	2.4	2.0	2.2								10.8	8.6
- TEXTILE	75.2	75.7	67.4	66.3	70.4								355.0	405.9
OLEFIN[h]	75.1	84.2	84.4	83.9	85.0								412.6	391.4
TOTAL NONCELLULOSIC ABOVE[i]	**307.2**	**319.5**	**313.7**	**315.8**	**311.4**								**1567.6**	**1549.8**
STAPLE+TOW+FIBERFILL[j]														
RAYON	**34.9**	**30.0**	**33.0**	**32.7**	**34.9**								**165.5**	**142.2**
NYLON[e]	70.7	64.1	64.3	67.1	71.9								338.1	335.2
ACRYLIC+MODACRYLIC	50.2	47.8	52.2	55.7	55.4								261.3	275.9
POLYESTER	179.9	171.2	173.7	180.8	183.9								889.5	868.5
OLEFIN+VINYON	24.0	25.4	28.7	28.2	29.3								135.6	118.7
TOTAL NONCELLULOSIC ABOVE	**324.8**	**308.5**	**318.9**	**331.8**	**340.5**								**1624.5**	**1598.3**
					END-OF-MONTH STOCK									
YARN+MONOFILAMENTS														
CELLULOSIC YARN	**13.0**	**12.2**	**13.3**	**12.1**	**12.2**								**12.2**	**19.2**
NYLON[e] - INDUSTRIAL[f]	23.8	25.6	24.1	26.1	27.2								27.2	27.5
- CARPET	55.4	51.8	56.2	52.5	59.0								59.0	51.9
- TEXTILE[k]	49.0	46.1	46.2	44.7	45.8								45.8	52.4
POLYESTER - INDUSTRIAL[f]	25.1	26.1	26.9	27.2	28.9								28.9	26.2
- LOW DENIER INDUSTRIAL[g]	3.3	3.3	3.5	3.6	3.4								3.4	3.8
- TEXTILE	81.4	87.0	93.1	92.9	88.5								88.5	71.2
OLEFIN[h]	66.7	69.4	67.1	69.5	66.4								66.4	63.3
TOTAL NONCELLULOSIC ABOVE[i]	**304.7**	**309.3**	**317.1**	**316.5**	**319.2**								**319.2**	**296.3**
STAPLE+TOW+FIBERFILL														
RAYON	**20.7**	**21.1**	**19.7**	**20.1**	**18.4**								**18.4**	**29.5**
NYLON[e]	63.0	70.4	84.1	89.1	88.0								88.0	70.2
ACRYLIC+MODACRYLIC	66.1	66.3	63.2	56.8	53.4								53.4	75.7
POLYESTER	147.9	147.3	151.0	148.6	150.4								150.4	187.7
OLEFIN+VINYON	33.3	33.7	34.0	31.7	29.7								29.7	24.3
TOTAL NONCELLULOSIC ABOVE	**310.3**	**317.7**	**332.3**	**326.2**	**321.5**								**321.5**	**357.9**
WOOL & COTTON CONSUMPTION														
APPAREL CLASS WOOL	12.6	13.2	13.1										38.9	18.9
CARPET CLASS WOOL	1.0	0.8	0.9										2.7	2.3
TOTAL RAW WOOL	13.6	14.0	14.0										41.6	21.2
RAW COTTON	269.5	263.3	264.2	266.3									1063.3	878.2

a. Year-to-date totals except for stock, which is the latest month's data.
b. The monthly production of each fiber may be calculated as total shipments plus a stock increase, or less a stock decrease, over the month.
c. Producers' total domestic plus export shipments.
d. Rayon yarn data are available annually only; see page 53 of the March 1986 issue.
e. Data for nylon exclude aramid.
f. Industrial is defined as 500 denier and coarser with an Instron tenacity of 7 grams or more per denier.
g. Low denier industrial is defined as finer than 500 denier with an Instron tenacity over 5.5 grams per denier.
h. Olefin yarn+monofilaments also includes spunbonded polypropylene and film fiber produced for textile end uses.
i. Saran and spandex data are not included in these totals. See page 53 of the March 1986 issue for annual data on these yarns.
j. Acetate staple+tow data are available annually only; see page 53 of the March 1986 issue.
k. Low denier industrial Nylon is now included with Textile.

TABLE 16:
FILAMENT YARN DOMESTIC SHIPMENTS[a]

MILLION POUNDS

ITEM		ANNUAL DATA 1982	1983	1984	1985	QUARTERLY DATA 1985 1ST Q	2ND Q	3RD Q	4TH Q	1986 1ST Q	2ND Q	3RD Q	4TH Q
		(C) CELLULOSIC YARN[j]		*(N) NYLON*		*(P) POLYESTER*				*(O) OLEFIN*			
HOSIERY[b]	N	92.3	104.3	101.5	98.1	25.2	25.0	24.8	23.1	26.5			
OTHER CIRCULAR KNIT[c]	N	25.7	24.5	17.6	12.9	3.1	3.2	3.0	3.6	4.3			
	P	228.4	293.7	174.7	182.0	33.1	46.9	58.6	43.4	36.1			
	C	1.6	2.1	2.3	2.6	0.4	0.4	1.1	0.7	0.6			
FLAT KNIT	C	71.7	79.1	67.2	53.0	15.5	15.4	11.7	10.4	11.4			
	N	130.8	162.2	135.2	143.6	36.0	33.4	35.9	38.3	36.8			
	P	87.0	116.6	137.3	160.8	37.1	39.5	38.9	45.3	40.6			
CARPET FACE	N	559.5	734.6	770.2	815.4	163.9	207.5	223.6	220.4	207.0			
	O	90.0	147.2	154.1	202.1	44.8	51.2	53.9	52.2	49.7			
CARPET BACKING[d]	O	184.7	198.8	227.8	354.6	83.8	93.4	91.0	86.4	89.1			
OTHER BROAD WOVEN[e]	C	88.8	113.6	108.8	111.3	22.7	26.7	28.9	33.0	31.9			
	N	82.2	83.6	90.7	71.4	16.9	16.3	17.7	20.5	20.2			
	P	367.0	489.9	392.2	400.4	96.1	107.2	102.5	94.6	90.3			
	O	172.5	201.1	190.3	225.7	54.6	60.1	55.6	55.4	61.4			
NARROW WOVEN[f]	C	2.9	1.7	0.7	1.5	0.2	0.3	0.4	0.6	0.9			
	N	30.2	35.3	39.9	31.1	7.8	7.7	8.3	7.3	8.0			
	P	28.1	35.5	38.7	38.4	9.6	9.5	10.2	9.1	11.5			
	O	12.1	15.0	14.9	15.2	3.8	4.0	3.9	3.5	4.5			
TIRES, INCL. CHAFER[g]	N	147.9	145.5	172.9	148.0	42.7	36.4	32.3	34.6	35.8			
	P	168.9	174.1	174.4	155.5	44.5	40.2	34.2	36.6	44.7			
OTHER RUBBER INDUSTRY[g,h]	N	17.3	18.3	20.9	15.3	4.6	3.7	3.5	3.5	4.2			
	P	26.7	27.8	32.7	32.2	7.2	8.2	8.3	8.5	2.9			
ROPE, CORDAGE & FISHLINE	N	29.1	31.7	35.0	35.3	8.6	8.6	8.7	9.4	9.6			
	P	14.4	12.2	15.7	13.8	3.1	3.7	3.9	3.1	3.4			
	O	84.8	95.5	106.9	108.2	28.8	29.8	23.2	26.4	27.0			
ALL OTHER[h]	C	4.0	1.1	1.1	18.7	5.6	5.2	4.5	3.4	3.8			
	N	50.6	54.4	54.2	48.9	14.9	11.2	11.1	11.1	11.0			
	P	214.3	144.6	179.2	221.1	59.4	56.4	52.6	52.7	55.3			
	O	32.9	41.0	31.6	31.8	7.8	7.5	6.8	9.7	9.6			
TOTAL ABOVE	C	**169.0**	**197.3**	**180.1**	**187.1**	**44.4**	**48.0**	**48.6**	**48.1**	**48.6**			
	N	**1165.6**	**1392.4**	**1438.1**	**1417.4**	**323.7**	**353.0**	**368.9**	**371.8**	**363.4**			
	P	**1134.9**	**1294.4**	**1144.9**	**1204.2**	**290.1**	**311.6**	**309.2**	**293.3**	**284.6**			
	O	**577.0**	**698.6**	**725.6**	**937.6**	**223.6**	**246.0**	**234.4**	**233.6**	**241.3**			
TOTAL DOMESTIC		**3046.4**	**3582.8**	**3488.7**	**3746.3**	**881.8**	**958.6**	**959.1**	**946.8**	**938.1**			
ALSO DIVIDED AS													
APPAREL		1128.2	1257.5	1072.1	1065.0	254.9	275.9	279.3	254.9	247.4			
HOME FURNISHINGS		1016.6	1328.7	1354.2	1626.1	351.4	414.7	430.1	429.9	405.5			
INDUSTRIAL		901.6	996.8	1062.4	1055.2	275.5	268.0	249.7	262.0	285.2			
SHIPMENTS OF FEED & PRODUCER-TEXTURED YARN (NONCARPET)[i]													
NYLON		122.3	127.1	118.7	114.9	28.4	28.7	29.0	28.8	29.7			
POLYESTER		737.9	832.4	675.5	776.3	181.0	204.5	206.0	184.8	168.9			
OLEFIN		26.8	28.0	23.3	22.3	5.2	5.9	5.2	6.0	4.3			

NA - Not Available.

*. Includes Aramid in 1982.

a. Filament yarn plus monofilament shipments by primary trade or end use; olefin includes spunbonded polypropylene but does not include spunbonded polyethylene.

b. Small poundages of polyester and cellulosic yarn are included in All Other.

c. Small poundages of olefin are included in All Other.

d. Small poundages of nylon and polyester are included in All Other.

e. Other Broad Woven except carpets, tire fabric, flat belting, etc. The olefin poundages include other home furnishings applications only, i.e., industrial applications are in All Other.

f. Narrow Woven includes apparel ribbons and braids, auto seat belts and/or furniture webbing.

g. Small poundages of olefin are included in All Other.

h. All Other includes sewing thread and other industrial applications. The olefin poundages include sliver knit backing. Also includes indirect exports.

i. These poundages are included in the Total Domestic area above.

j. Data prior to 1985: acetate yarn only. Data for 1985 and 1986: acetate and rayon yarn.

k. Cellulosic yarn poundages included in All Other.

TABLE 17:
STAPLE+TOW DOMESTIC SHIPMENTS

MILLION POUNDS

ITEM		ANNUAL DATA 1982	1983	1984	1985	QUARTERLY DATA 1985 1st Q	1985 2nd Q	1985 3rd Q	1985 4th Q	1986 1st Q	1986 2nd Q	1986 3rd Q	1986 4th Q
(R) RAYON	*(N) NYLON* *	*(A) ACRYLIC+MODACRYLIC*				*(P) POLYESTER*				*(O) OLEFIN*			
HOSIERY, SWEATERS & CRAFT YARNS[a]	A	230.5	237.3	204.8	197.2	48.8	48.9	49.0	50.5	57.2			
	NPR	8.8	9.5	6.6	5.5	1.7	1.1	1.3	1.4	1.4			
PILE FABRICS[a]	A	36.4	33.0	30.0	24.5	6.6	7.1	6.3	4.5	6.0			
	P	15.6	18.2	18.4	14.9	3.9	4.1	3.7	3.2	4.1			
OTHER CIRCULAR+FLAT KNIT[c]	R	5.7	3.5	4.3	5.5	0.7	1.3	2.2	1.3	1.1			
	A	112.6	129.5	118.5	139.1	27.3	38.3	37.6	35.9	38			
	P	288.8	354.4	283.0	295.5	67.7	76.7	74.0	77.1	87.9			
BLANKETS[a]	A	23.7	27.1	25.2	30.2	6.1	7.4	8.8	7.9	6.6			
	P	12.0	10.5	5.5	6.2	0.9	1.9	2.2	1.2	0.8			
OTHER BROAD WOVEN	R	146.6	182.1	177.7	174.9	39.0	39.4	44.6	51.9	53.9			
	N	56.4	59.0	42.5	37.4	11.4	8.2	8.8	9.0	10.0			
	A	25.7	32.5	29.5	38.2	8.8	9.6	9.2	10.6	9.8			
	P	889.0	1062.9	1039.1	864.9	214.1	208.3	212.4	230.1	226.8			
	O	16.1	19.4	22.1	26.9	6.4	6.9	6.0	7.6	1.0			
CARPET FACE YARNS	R	0.1	0.2	0.3	0.5	0.1	0.1	0.1	0.2	0.1			
	N	594.4	815.2	751.0	773.9	176.5	190.0	199.4	208.0	180.1			
	A		Included in All Other										
	P	114.7	139.0	131.4	126.8	30.7	33.9	30.3	31.9	31.3			
	O	76.8	93.6	96.5	107.4	25.2	30.6	27.7	23.9	25.4			
FIBERFILL[e]	P	228.4	275.4	276.1	281.1	72.6	65.0	68.6	74.9	71.6			
FLOCK	NP	10.2	10.6	9.2	5.3	1.4	1.2	1.3	1.4	1.6			
	R	3.1	3.2	2.7	1.8	0.6	0.4	0.6	0.2	0.6			
NONWOVENS[e,f]	R	111.9	119.0	126.3	113.5	27.6	28.9	29.0	28.0	31.7			
	N	3.8	4.9	2.8	2.5	0.7	0.7	0.5	0.6	0.5			
	P	155.2	177.4	177.2	162.5	44.0	39.2	39.5	39.8	46.5			
	VINYON+O	39.0	61.5	119.2	135.8	34.0	32.0	34.7	35.1	42.3			
ALL OTHER	R	24.3	23.8	18.8	25.9	5.5	6.1	6.0	8.3	3.7			
	N	7.7	5.2	9.4	11.2	2.8	2.6	2.9	2.9	2.9			
	A	29.0	32.8	38.7	29.5	7.7	8.4	7.7	5.7	4.8			
	P	57.8	55.8	56.2	116.9	21.0	30.4	30.8	34.7	29.3			
	VINYON+O	7.0	8.9	3.1	9.6	1.6	2.4	2.4	3.2	5.2			
TOTAL ABOVE	**R**	**293.7**	**333.5**	**331.9**	**323.7**	**73.8**	**76.6**	**82.9**	**90.4**	**91.6**			
	N	**673.3**	**897.1**	**814.4**	**830.3**	**192.8**	**202.7**	**212.9**	**221.9**	**195.2**			
	A	**457.9**	**492.2**	**448.7**	**458.7**	**105.3**	**119.7**	**118.6**	**115.1**	**123.1**			
	P	**1767.5**	**2099.2**	**1992.2**	**1872.7**	**456.3**	**460.2**	**462.4**	**493.8**	**499.1**			
	VINYON+O	**138.9**	**183.4**	**240.9**	**279.7**	**67.2**	**71.9**	**70.8**	**69.8**	**73.9**			
TOTAL DOMESTIC		**3331.3**	**4005.4**	**3826.1**	**3765.1**	**895.4**	**931.1**	**947.6**	**991.0**	**982.9**			
ALSO DIVIDED AS													
APPAREL		1321.7	1461.3	1277.1	1255.0	289.0	316.4	314.0	335.6	363.6			
HOME FURNISHINGS		1266.4	1630.0	1559.0	1536.9	365.7	380.0	385.2	406.0	371.0			
INDUSTRIAL		743.2	914.1	992.1	973.2	240.7	234.7	248.4	249.4	248.3			

* 1982 poundages include Aramid.

a. Olefin poundages are included in All Other.

b. Rayon and nylon poundages are included in All Other.

c. Nylon poundages are included in All Other.

d. Rayon, acrylic and nylon poundages are included in All Other.

e. Wet & dry laid and needled batts only.

f. Acrylic poundages are included in All Other.

GRAPH 3:
SELECTED U.S. MONTHLY TEXTILE FIBER DATA